

process. We note that there are significant data gaps that impact the certainty of the models developed to assess the appropriate volume. A key flaw in the NSW Floodplain Harvesting Policy is the focus on extractive rights with no comparable investment in understanding environmental, cultural and social impacts.

We urge that all unapproved floodplain works and those identified to adversely impact ecological and cultural values on the Barwon-Darling/Baaka are remediated or removed before works access licences are granted. It is particularly important that no floodplain works are licensed for floodplain harvesting access in the ecologically and culturally sensitive Zones A & D on Barwon-Darling/Baaka designated floodplain.

Comments on proposed rules:

1. Accounting –

██████ supports annual accounting only with no carryover.

██████ supports a 1 ML unit share or less for an initial water availability determination for each individual new license.

██████ supports a 1 ML unit share or less for subsequent annual water availability determinations for each individual new license.

██████ objects to an exemption for rainfall runoff on developed fields. All water take must be accounted for through the licensing system.

2. Trading –

██████ does not support any trading of floodplain licences. This will cause environmental and cultural harm and will be too difficult to regulate.

3. Access to flows –

██████ supports the placement of strong rules to manage resumption of floodplain harvesting after dry periods. The end-of-system flow targets set for the main tributaries are not adequate. These flows must be protected from extraction in the Barwon-Darling/Baaka.

██████ objects to the low triggers set within the valley for resumption of access. The target in Menindee Lakes must be 450 GL to protect the ecological values of the lake system and to ensure connectivity with the Lower Darling and Lower Murray.

4. Protection of held environmental water -

The Australian taxpayer has purchased water to be managed for environmental outcomes. Flows generated by the release of environmental upstream of the Barwon-Darling/Baaka, including from Queensland, must be protected from extraction if they enable overbank flows.

5. Amendment provisions-

██████ supports strong amendment provisions in the water sharing plan to enable reduction in access to floodplain harvesting when new information is gained through the metering process and better understanding of return flows from the floodplain.

Dubbo Environment Group Inc. Barwon -Darling Floodplain Harvesting Public Consultation Feedback

Dubbo Environment Group has actively campaigned for healthy rivers since their organisation was founded in February 2020. Our first appointment was with our local MP, Dugald Saunders, to ask questions of the minister responsible for water management in February 2020, Melinda Pavey. We wished to know why the northern floodplain irrigators were allowed to harvest floodplain water without any licence and without any monitoring. We also wished to know why NSW has continually failed to provide data for the MDB Authority or to comply with their regulations.

DEG is informed by the research and science provided by NCC, Professor Richard Kingsford (UNSW), by Royal Commissions into water MDB management and by Inland Rivers Network.

We are aware that the environmental diversity of the Murray Darling Basin has degraded severely in the last 2 decades and that the overwhelming reason is that too much water has been extracted.

We are aware that wetlands, even when they receive plenty of water, as they have this year, still do not attract the quantity and variety of water birds as they did in 2000. The ecology has not been protected. Sustainability has not been a priority.

We are aware that Aboriginal communities have been ignored, left without important cultural river ties and without drinking water because environmental water has not been adequate, even while every NSW ministerial policy quotes, "We pay respect to the Traditional Custodians and First Peoples of NSW, and acknowledge their continued connection to their country and culture." as NSW Water Management website does.

Comments:

1. VOLUME

The volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares). Since this figure differs greatly from the figures used in the modelled scenarios, we have no confidence in the information provided for FPH assessment or proposed entitlement in the Barwon-Darling River.

We do not accept that new FPH licenses will keep extraction below the Plan Limit and we certainly do not agree that with the rainfall runoff exemption. We believe the rivers must come first before free water is diverted from them.

2. ACCOUNTING RULES:

We do not agree with a 500% carryover as we believe this will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply.

What we would like to see is annual accounting with no carryover.

We support that initial allocation is 1 ML unit share or less depending on antecedent conditions and that annual allocation is 1 ML unit share or less.

3. TRADING:

We do not agree with any trading of FPH entitlement.

4. FLOODPLAIN WORKS

We strongly believe that no works in Floodplain Management Plan Zone A and D should be licensed to take FPH. Nor should naturally occurring lagoons be licensed to take FPH

5. ACCESS RULES

We support no access under resumption of flow rules. We believe these rules must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries.

Strongly object to no FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia.

6. PROTECTION OF ENVIRONMENTAL WATER

Rules must protect held environmental water inflows from Queensland and NSW northern tributaries.

7. AMENDMENTS

We support strong amendment provisions for all FPH management rules. Rule changes need to be made without triggering compensation.

Thank you for the opportunity to comment. I am happy for this submission to be made public.

Margaret McDonald (President Dubbo Environment Group Inc)

██████████ Dubbo, NSW 2830

████████████████████

██████████

Submission on Barwon-Darling Floodplain Harvesting Rules

NSW Government management of the Barwon-Darling River has been disastrous.

In the 1991/2 summer (Figure 1), the Barwon-Darling achieved a world record – “the largest river bloom of blue-green algae recorded anywhere in the world emerged along the Darling River” (Murray Darling Basin Commission). This extended over 1,000 kilometres from Mungindi to Wilcannia. Growth of blue-green algae is promoted by warmth, low flows and run-off of phosphate and nitrate fertiliser.



Figure 1: Blue-green algae bloom in the Darling River in 1991/2, from The Independent Magazine
(Crease across centre of picture).

The NSW Government came up with a unique solution (Figure 2) to the blue-green algae problem, allow the irrigators to drain the river – no water – no algae.



Figure 2. Darling River below Wilcannia 2007

Nothing has changed, and with the proposed floodplain harvesting allocations it appears that nothing will change in the future. The Barwon-Darling River was identified by the Natural Resources Commission as suffering ecological collapse during recent intense drought conditions. During both the Millennium drought and the recent 2017-2020 drought, the Barwon-Darling has gone into ecological collapse, including the internationally-famous fish-kills and the obliteration of the mollusc population.

Freshwater mussels are considered ecosystem engineers of rivers; they modify substrates through burrowing, mediate water quality through filtration, provide food and habitat for other organisms and play a significant role in the biogeochemical cycling of nutrients and are also seriously threatened globally. The rivers of the northern Murray-Darling Basin (MDB) are home to three species of freshwater mussel – the large ‘river mussels’ *Alathyria jacksoni* and *Alathyria condola* and the smaller ‘floodplain/billabong mussel’ *Velesunio ambiguus*.

Effect of floodplain harvesting (FPH)

The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL to FPH extraction. This volume was used in the development of the Murray-Darling Basin Plan. The proposed new entitlements are triple this volume; the volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares), as identified in the Community Assistance Report. In addition there is a proposal to allow 500% carryover and a rainfall runoff exemption (another free kick). The combination of these factors and the over-generous FPH proposals for the tributaries will cause continuing devastation to wetlands, cultural values, groundwater recharge, basic rights, town water supplies and human morale downstream. The proposed management of FPH in the Barwon-Darling must not lock in individual property history of use. That use has been too great for the health of the river and floodplains.

Metered extraction (does not include FPH) from the Barwon-Darling has breached the Basin Plan Sustainable Diversion Limit in 2019 and 2020. Water authorities have tried to ignore this by claiming that it is all due to inaccuracies of old water meters. This excuse is not believed.

Cultural Implications for Aboriginal Groups

The proposed allocations of FPH licences effectively prioritises irrigation ahead of all other water uses in breach of the NSW 2000 Water Management Act. No group is more affected than the Aboriginal nations who have occupied the Barwon-Darling River for longer than most people can imagine. The Barkintji people, in particular, lived off the produce of the river and its floodplains. Much of their lifestyle and culture depended on their relationship with the river and lakes. For decades their river and lakes have been deprived of water for extended periods, resulting in dire morale and social problems. The proposed FPH licencing will continue their disadvantage.

NSW Government Departments now regularly provide tokenistic acknowledgements of Aboriginal traditional owners, the Elders etc, but when it comes to anything real, they are totally forgotten, just as in this FPH proposal.

Recreational Opportunities for People of Western NSW

The people of western NSW in the city of Broken Hill, in the smaller towns and on farms are all human and have the human need for recreational opportunities. And what better opportunities are there in the often very hot and dusty western NSW than some time at the river and lakes? But that is not what has been happening in many recent years.

Mismanagement has left the river dry or at least with no flow, and the lakes empty. The idea of allowing the Menindee Lakes to drop to 195 GL before embargoing fresh flows is just horrible and unjustifiable. At 195 ML the water may lie in inaccessible pools well away from lake shores, evaporating, stinking, becoming salty and of no use to man or beast.

Summary

1. The volume of FPH to be licensed, estimated at 51.32 GL is much too great, at least triple the figures used in the modelled scenarios. I have no confidence in the information provided for FPH assessment or proposed entitlement in the Barwon-Darling River.
2. The proposed new FPH licences will not keep extraction below the Basin Plan limit. That limit is being exceeded now, even without considering FPH.
3. The rainfall runoff exemption is opposed - this water must be accounted for.
4. I definitely do not support 500% carryover. This will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply.
5. I support annual accounting with no carryover.
6. I Support initial allocation of 1 ML unit share or less depending on antecedent conditions and support annual allocation of 1 ML unit share or less.
7. I do not support any trading of FPH entitlement – it is likely to cause environmental and cultural damage – this fails to meet the requirements of trading rules.
8. There should be no works in Floodplain Management Plan Zone A and D licensed to take FPH.
9. No lagoons or natural drought refugia should be licensed to take FPH.
10. No FPH licenses should be granted until all unapproved and floodplain ‘hotspot’ works are removed or modified.
11. There should be no access under resumption of flow rules and these must be stronger, not only in the Barwon-Darling but also the end-of-system requirements in the major tributaries: Border Rivers, Gwydir, Namoi, Macquarie.
12. I strongly object to no FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia. This offers no drought protection and will cause ecological damage. A target of 450 GL in Menindee is needed with higher forecast upstream flows.
13. Rules must protect held environmental water inflows from Queensland and NSW northern tributaries.
14. I support strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation

Brian Stevens



Springwood 2777



I wish to have my submission published.

Barwon Darling Floodplain Harvesting rules

7/7/22

I submit the following the comments regarding the proposed Barwon Darling Floodplain Harvesting Rules

The volume of flows to be licensed (estimated to be 51.32 GL), differs greatly from the figures used in the modelled scenarios. I have no confidence in the information provided for this assessment or proposed entitlements of Barwon-Darling River flows.

I strongly oppose the allowance of 500% carryover. This level of carryover will have a comparable impact on key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply as the installation of new storages upstream.

Carryover and storages are the problem, not the answer!

I cannot support any trading of entitlements given the 3rd party impacts (damage) to rivers and streams in the Southern Basin. Despite assurances of no 3rd party impacts, the health of rivers and streams are being damaged by unforeseen and unplanned flows dictated by water markets.

The protection of environmental flows must be paramount, particularly the protection of held environmental water inflows from Queensland and NSW northern tributaries.

John Pettigrew: [REDACTED] Shepparton 3630

[REDACTED]

I would like this submission to be published.

Fwd: Submission: Proposed Barwon-Darling Floodplain Harvesting (FPH) Legislation July 8th NSW PARLIAMENT

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Fri 8/07/2022 6:47 AM

Get [Outlook](#) for iOS

From: [REDACTED]

Sent: Thursday, July 7, 2022 5:06:20 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Submission: Proposed Barwon-Darling Floodplain Harvesting (FPH) Legislation July 8th NSW PARLIAMENT

(I don't donate to any political parties and I am not a member of any political party.)

I object to the current proposed Floodplain Harvesting legislation which is due to be presented in NSW Parliament on Friday July 8 in NSW Parliament.

The legislation will contribute further to the catastrophic decline of the entire Murray Darling Basin ... it is nothing more than a hastily devised bandaid solution that will favour big irrigators at the expense of downstream communities.

Regular satellite photos have shown increasing unauthorised dam building in Northern NSW over years ... but legislating to legalise this water theft is the wrong way to go. It will only ratify ongoing dishonest practises by big business and further deprive the Basin of vital water. Laws must not be backdated to support theft and dishonest practises.

Given that the Barwon-Darling underwent a total ecological collapse during the last drought (who can forget the millions of dead fish and the Menindee Lakes totally dried up?) ... it's unacceptable to legalise levels of water take-up in the north that could cause the entire system to collapse again in the next dry season.

Flooding is an essential part of the Murray Darling Basin and yet NSW water authorities have been holding back vital flood waters since the Water Reforms of the 90s. The results have been disastrous and are slowly turning a once lush region into a dried out wasteland. So called 'Sustainable Diversion Limits' have also wrought destruction ... depriving the region of life saving water.

Natural water flows are not 'wastage' as the SDL policy states. Flooding is essential for the health of all the rivers creeks and wetlands and the surrounding land in this region. Whole previously thriving ecosystems along the course of the Darling/Baaka are gradually turning to dust.

The proposed FPH rules further enshrine the misguided policy of depriving the land of natural flooding. They don't protect environmental water flows from Queensland and NSW. They don't

provide enough water to sustain wetlands or support groundwater recharge along the MDB ...both of which are the lifeblood of the entire ecosystem.

I have lived out west and witnessed the terrifying dust storms that turn day into night in rural communities in Western NSW. These are much more common than they used to be because there is not enough flooding allowed by NSW water authorities. No flooding means no moisture in the soil to hold the vegetation cover that is required to keep the soil in place. Millions of tonnes of precious topsoil are regularly lost during these storms.

We need to work towards saving what remains of the unique environment of the Murray Darling Basin and to provide equity for downstream communities. We must not enshrine excess water take ups in law. It leaves the downstream communities to carry the risk. That is totally unacceptable. The drying up of the landscape is also destroying the cultural heritage of Indigenous groups that live along the rivers. They mourn the death of the fish and mussels the death of trees and the loss of unique ecosystems that used to exist all along the Darling/Baaka in particular. Water in the rivers is no longer potable due to lack of flows and too often toxic blue-green algae are apparent all along the Darling/Baaka in particular.

I object to the fact that proposed volumes in the legislation are above the limits recommended by the Murray Darling Basin Plan. The proposed FPH licenses will not keep extraction below the MDBP limit.

I also object to the proposed rainfall runoff exemption. With the MDB now in perpetual crisis every drop of water take-up needs to be accounted for.

In addition:

I object to the proposal that FPH entitlements be made available for trading on the open market. Water is life ... trading it for money to anyone other than another landholder in the same district and on the same length of river will make vital water supplies unaffordable for many during times of need. Water prices should be controlled by government and trading should only be between local landholders.

FPH water trading in an open market reeks of government corruption ... i.e. collusion with big business. Big corporations are the only ones who benefit from it. Many of these big corporate farms are significant National Party donors.

Water trading had a catastrophic impact on many small farmers in the Basin during the last drought. Companies not even based in Australia were able to compete to drive the price of water sky high... this practise was the final nail in the coffin of many struggling farming families suffering in the drought who couldn't afford to buy water allocations at inflated prices and were forced to sell their properties ... destroying the fabric of their rural communities. Many family farms and dairy farms went to the wall.

The plan has been rejected three times by NSW Parliament for good reason ... the last time as recently as February this year. It is still no good.

Floodplain harvesting should be regulated, licensed and measured ... but not by the new proposed legislation which will lead to more inequity in water supplies to all downstream communities and threatens to worsen the already bad condition of the whole river system from top to bottom.



Meanwhile it's quite simple. Step in and forbid any further unauthorised dam building in Northern NSW until it can be properly controlled. Given visual access to satellite technology it's quite easy to monitor.



Fwd: Barwon-Darling Flood Plain Harvesting Rules

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Fri 8/07/2022 6:50 AM

Get [Outlook](#) for iOS

From: [REDACTED]

Sent: Thursday, July 7, 2022 10:40:44 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Barwon-Darling Flood Plain Harvesting Rules

I am making a submission on this topic

Submission for the Barwon-Darling Floodplain Harvesting (FPH) Rules

I strongly object to the Floodplain Harvesting (FPH) Rules as they are proposed.

The Barwon –Darling River suffered total ecological collapse, when I viewed it in 2019 due to the 10 year drought. The drought will happen again and again as that is how Australian weather is constituted if you look at the long view over hundreds of years (1). The River has only slightly recovered due to the unseasonal rain that has fallen in 2022.

The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL (gigalitre = 1 billion litres) to Flood Plain extraction. This volume was used in the development of the Murray-Darling Basin Plan. The proposed new entitlements are way above this volume.

The volume of Floodplain Harvesting to be licensed is estimated to be 51.32 GL as identified in the Community Assistance Report. This differs greatly from the figures used in the modelled scenarios. I have no confidence in the information provided for Flood Plain Harvesting assessment or proposed entitlement in the Barwon-Darling River.

I do not agree that the new Floodplain Harvesting licenses will keep extraction below the Plan Limit. I do not support the rainfall rain-off being exempted from accountability.

I support annual accounting with no carryover. There is no rationale for this procedure in the rules. It only causes larger entitlements when there is a very high probability of a severe drought. It favors the bad policies of the past which has led to historic disasters (2).

Rules must protect environmental water inflows from Queensland and NSW northern tributaries. This water is an important contribution to the Barwon-Darling River system.

It is absolutely essential that the first allotment of available water must be to the First Nation clans that live along the River. They have ensured the viability of this river for 100,000 years. A healthy river system contributes to the maintenance of their cultural practices and the health of the whole community, especially the children.

No Floodplain Harvesting works licenses should be granted until all unapproved and floodplain 'hotspot' works are removed.

No lagoons or natural drought refugia should be licensed to take Floodplain Harvesting. This is stealth of accessible water that should belong to the community, not commercial interests.

The rules must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi and Macquarie Rivers so that the water reaches lower levels and finally South Australia.

I strongly object to allowing access to water in Menindee Lakes when levels are only 195GL. There must be at least 4,000 ML at Wilcannia before giving access. This lower limit of 195GL does not give any drought protection and will cause ecological damage. A target of 450GL in Menindee is needed with higher forecast upstream flows.

It is an abomination that there is a market for trading water. This was brought in by Howard government in the 2004 period when no one realized the implications of this horrendous, evil legislation. It only leads to enrichment of wealthy corporations to the detriment of all people living along the river, making an honest living on small holdings. I do not support any trading of Floodplain Harvesting entitlement. It is a travesty of basic human rights when we all need water to live. It will cause environmental and cultural damage. It should be outlawed by the Stock Exchange as it fails to meet the requirements of trading rules.

There should be no compensation for those affected by new management rules of flood plain harvesting when the rules are designed to protect and enhance the Darling River not to enrich individuals..

References

- 1) **GERGIS J. (2018) SUNBURNT COUNTRY THE HISTORY AND FUTURE OF CLIMATE CHANGE IN AUSTRALIA MELBOURNE UNIVERSITY PRESS.**
- 2) **SIMONS M. (2020) CRY ME A RIVER, THE TRAGEDY OF THE MURRAY-DARLING BASIN BLACKINCBOOKS.COM**



AUSTRALIAN FLOODPLAIN ASSOCIATION

Healthy Rivers - Healthy Communities

Sarah Moles,
AFA secretary,
33 Mailmans Rd, North Branch, Qld 4370
australianfloodplains@gmail.com, [REDACTED]

By email to: floodplain.harvesting@dpi.nsw.gov.au

8th July 2022

Response to Draft Barwon - Darling Water Sharing Plan

The Australian Floodplain Association takes this opportunity to repeat we cannot support any Water Sharing Plan, Water Resource Plan nor Regional Water Strategy that aims to lock-in unsustainable levels of additional floodplain harvesting take.

As a Peak Body comprised of floodplain and wetland landowners, indigenous groups, shire councils, local businesses and members of rural and remote communities dependent on healthy rivers, floodplains and wetlands, the AFA represents a far wider range of interests than the irrigation sector.

The fact that the NSW government refuses to comply with its own legislation and uphold the hierarchy of water management principles as set out in s5(3) of the NSW Water Management Act 2000 is infuriating. We are tired of repeatedly expressing our deep concerns about fundamental flaws and biases; and our views and well-formulated advice consistently being ignored in stakeholder “engagement” and “consultation” processes. We use those terms extremely loosely.

The NRC noted the Barwon-Darling River was approaching ecological collapse during recent intense and prolonged drought conditions. The volume for FPH in the Barwon Darling valley in the 2012 WSP was 16.5GL. The same figure was used for development of the MDB Plan. But the proposed new FPH entitlements are 51GL – more than 3 times the Plan volume. This is an outrageous and completely unacceptable claim.

Our members and others along the length of the river have been able to see this disaster coming for years. Extraction from the Barwon-Darling has breached the Sustainable Diversion Limit in 2019 and 2020 as well as breaching the MDB Cap.

We do not believe that new FPH licenses can possibly keep extraction below the Plan Limit,

The Australian Floodplain Association (AFA) is a non-government organisation, established in 2006. It represents floodplain and wetland landowners and their communities who depend on healthy rivers, floodplains and wetlands. Its membership resides predominantly within the Northern Murray-Darling Basin and includes floodplain graziers, community groups and shire councils.

We do not support the exemption for rainfall runoff – ALL water must be accounted for.

We categorically reject the proposed 500% carryover rule. This will cause loss of key flood flows for downstream wetlands, groundwater recharge, basic landholder rights, town water supplies and First Nations people's cultural values. However, we do support annual accounting with no carryover. The Barwon-Darling is a boom and bust system and such reliability for a single sector is unacceptable. So too is a Plan built on and that seeks to lock in a history of inequitable and unsustainable use.

There are no circumstances under which the AFA will support trading of FPH entitlements.

With regard to floodplain infrastructure, no new FPH works licenses should be granted until all unapproved and so-called 'hotspot' works are removed or modified to the satisfaction of the regulator. Further, the AFA opposes the licensing of works to take FPH in Zones A and D.

We also strongly oppose the licensing of natural lagoons or drought refugia to take FPH water.

Access rules are arguably our most pressing concern. Given DPIE's inability to apply meaningful targets backed by science, it is the most contentious. Again, we stress the need for NSW to comply with its own legislation and the hierarchy of water use principles. It is our understanding that sound recommendations from both OEH & DPIEW have been overruled by politics.

The AFA strongly objects to the proposed FPH access trigger of 195 GL in the Menindee Lakes Scheme. This figure is presented without any supporting evidence, and has been confirmed as storage held *across all lakes*. The reality is that this represents only 25GL of active water, a truly insulting trigger.

The proposed 195GL trigger also makes a mockery of the First Flush Rules. The figure of 30,000ML continuous flow at Bourke *inclusive of* Held Environmental Water is in itself a disappointing outcome.

In our view, 480GL of *active water* – as proposed by then Minister Pavey at a meeting in Menindee - is a more realistic starting point for negotiations. We find it extremely disappointing that the Government/Department has stepped away from this commitment.

Records show that from 1979-2002, the MLS volume remained above 195GL. From 2002 onwards, due to increased extraction upstream, drought and new operational policies / procedures the level has fallen below this threshold frequently - and increasingly often.

In December 2017 the MLS storage held 307GL of available water. A year later the first of several fishkills occurred.

The Australian Floodplain Association (AFA) is a non-government organisation, established in 2006. It represents floodplain and wetland landowners and their communities who depend on healthy rivers, floodplains and wetlands. Its membership resides predominantly within the Northern Murray-Darling Basin and includes floodplain graziers, community groups and shire councils.

It is beyond belief that DPIE could forget this. The Australian public certainly won't. We conclude that the ministers office chooses to ignore the facts. But we won't. We take the risks to the riverine ecology, local residents and local communities extremely seriously.

The community demands a realistic and appropriate target storage threshold for the Menindee Lakes Scheme based on science and recent history. It is our strong view that the long-term historical record will be increasingly irrelevant as climate extremes intensify. What is required are meaningful and measured strategies to ensure connectivity along the entire length of the Barwon-Darling and overall system health. We are weary of vague statements of intent while extraction is increased yet again.

This proposed trigger of 195GL offers no drought protection and will cause great social and ecological damage. The AFA endorses the view of the Wentworth Group of Concerned Scientists based on careful analysis of historic records, that an MLS trigger of 450GL of *active water* is required to ensure higher priority environmental and downstream needs can be reliably met. We also agree with their conclusion that additional, realistic triggers are required in upstream tributary Plans and must be enshrined in legally binding WRPs.

Furthermore, there should be no FPH access under resumption of flow rules. These need to be strengthened to protect higher end-of-system flows in the Barwon-Darling's NSW tributaries ie the Border Rivers, Gwydir, Namoi and Macquarie valleys.

Rules must also ensure Held Environmental Water from all the northern tributaries are protected from extraction.

The AFA also supports strong amendment provisions to enable FPH rule changes without triggering compensation. Irrigators were handed valuable windfalls in the form of property rights in water. Taxpayers should not have to stump up again when other water users face such inequitable access to it.

We reiterate our strong and consistently held view that to be Cap, SDL and Basin Plan compliant there can be no additional FPH licences and no increase in FPH take *anywhere* in the northern Basin.

We conclude by taking this opportunity to remind the NSW Government that from the late 1970's to the early 2000's it was, in our view, quite accurate to describe Queensland as the MDB's "cowboy state". Its water management utterly failed to reflect an equitable outcome for all stakeholders – including NSW water users.

It is without any doubt whatsoever that NSW now owns that title. Even the fish kills at Menindee, plus two damning reports that investigated that event, and the unprecedented recommendations on water management in NSW from Mr Ken Matthews have not changed the attitude of water managers - and we assume their political masters. In our view this represents a damning indictment of the state of water governance in NSW.

The Australian Floodplain Association (AFA) is a non-government organisation, established in 2006. It represents floodplain and wetland landowners and their communities who depend on healthy rivers, floodplains and wetlands. Its membership resides predominantly within the Northern Murray-Darling Basin and includes floodplain graziers, community groups and shire councils.

We are tired of the NSW Government's continual recalcitrance and refusal to act in the national interest. We demand water planning and management for all.

There is nothing confidential in our submission and we consent to any part of it being made public.

Yours sincerely,

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the bottom, positioned below the text "Yours sincerely,".

The Australian Floodplain Association (AFA) is a non-government organisation, established in 2006. It represents floodplain and wetland landowners and their communities who depend on healthy rivers, floodplains and wetlands. Its membership resides predominantly within the Northern Murray-Darling Basin and includes floodplain graziers, community groups and shire councils.



Fwd: No to flood plain harvesting

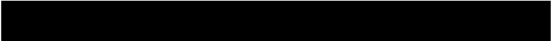
Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Fri 8/07/2022 9:35 AM



Get [Outlook](#) for iOS

From:



Sent: Friday, July 8, 2022 8:34:09 AM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: No to flood plain harvesting

Hi.

As a low darling river person I have seen the destruction of the mighty Darling river over, Over extraction. I have seen community's struggling to survive during the last major droughts, I have witnessed Fish kills with the lost of over 100 million fish just in the Menindee area alone, plus the number of Kangaroos, emus and other native wild life I witnessed die during the last man made drought due to over extraction.

It was people just like me that had to live through the horror of over extraction.

Flood plan harvesting is only about the people who live in that area and only for profits. We are looking at the environment form top to bottom of the system. Remover the water at the top and everyone below suffers in one way or another. By allowing flood plain harvesting is madness. The rivers must flow for everyone form top to bottom. By taking the water at the top, people at the bottom starve and go bankrupt and that's no way to have a country working

I say no to flood plain harvesting to save this mighty country.

With the number of people now moving out to the west of NSW we need to stop over flood plain harvesting, extraction and water theft for the lower darling river to grow.



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

DPE – Water

By email floodplain.harvesting@dpi.nsw.gov.au

8 July 2022

Submission: Draft rules for floodplain harvesting access licences in the Barwon-Darling Water Sharing Plan

[REDACTED] is a grass roots community network dedicated to providing a strong voice for our local rivers, aquifers and wetlands in the Murray-Darling Basin for the benefit of wildlife, plants and people. We pay our respects to Elders past and present and acknowledge that this land was never ceded.

[REDACTED] is pleased to have the opportunity to provide a written submission to the draft rules for floodplain harvesting access licences in the Barwon-Darling/Baaka River.

[REDACTED] considers that the volumes and rules proposed for licencing floodplain harvesting in the Barwon-Darling are not aligned with the water management principles in the Water Management Act 2000, nor the 2020 National Closing the Gap report.

Background

There should be no further issuing of floodplain harvesting licences until the cumulative environmental and cultural impacts of floodplain harvesting have been assessed.

In 2019 the Natural Resources Commission referred to the Barwon Darling/Baaka as an ecosystem in crisis¹. As the Darling/Baaka dried up into a string of disconnected green pools, millions of fish perished. The repercussions of the loss of an estimated 2.9 million fresh water mussels is still being grappled with².

The Darling Baaka River has never been an ephemeral system. While periods of very slow to no flow happened, the river never dried up the way it did in the 2017-2020 drought.

Decades of uncapped floodplain harvesting expansion have reduced the resilience of the river, so when severe droughts roll around, the ecosystem collapses.

¹ [NRC review B-D WSP 2019](#)

² https://theconversation.com/they-live-for-a-century-and-clean-our-rivers-but-freshwater-mussels-are-dying-in-droves-164567?fbclid=IwAR0JkBml0IPtuRPykvfSxJWk6yCRvTTYV19Rs9kSccto2EmJaB9SoJlq0_w

First Nations

The should be no floodplain harvesting entitlements issued in the Barwon Darling/Baaka River until adequate Cultural Flows have been secured to the satisfaction of the Echuca Declaration.

The Barwon Darling/Baaka River is dying, and the impact on First Nation communities is heart breaking. The average life expectancy for a male in Wilcannia is 37³. The Baaka is the blood of the Barkandji People, and without the river they are dying. What is happening on the Darling Baaka is cultural genocide.

The United Nations Declaration on the Rights of Indigenous Peoples defines First Nations' inherit right to access water. As First Nations allies, █████ supports the Echuca Declaration⁴, which states:

The Federal and State Government of Australia have used their laws to take away our lands without our permission and without compensation.

We have obligations under our Law/Lore and Custom to care for Country and to respect our neighbours both down and up stream.

Cultural Flows are water rights that we hold in our own name and are not held in trust by Government AND provide us with enough clean water to improve all parts of our lives.

The Federal and State Government must give us the money to buy water rights and give us water rights.

A target of the 2020 National Agreement on Closing the Gap is that:

Aboriginal and Torres Strait Islander people maintain a distinctive cultural, spiritual, physical and economic relationship with their land and waters.

█████ considers that the issuing of large volumes of brand new water access entitlements to the industry that has long had the benefit of this water for free, before the cultural water requirements of the Barwon Darling/Baaka have been met, is an affront to the United Nations Declaration on the Rights of Indigenous Peoples.

Volume

No more than 16.5 GL of floodplain harvesting entitlements should be licenced in the Barwon-Darling.

16.5 GL is the estimated annual average floodplain harvesting diversion in the 2012 Barwon-Darling water sharing plan. It is the figure that was used in the development of the Murray Darling Basin Plan.

The proposed volume to licence of 51.32 GL (or unit shares) quoted in the Report to Assist Community Consultation is different to the figures referred to in the various modelling scenarios, therefore it's difficult for █████ to have confidence in the figures as presented.

The quote on page 13 of the Report to Assist Community Consultation "*in order to achieve the same level of historical diversions*" gives HRD reason to believe that the intention of the Department is to licence historic use, not an environmentally sustainable level of take.

All rainfall runoff should be licenced, there should be no exemption.

³ <https://en.wikipedia.org/wiki/Wilcannia>

⁴ <https://www.mldrin.org.au/echuca-declaration-final-pdf/>

Accounting Rules

There should be no carry over allowance for water extraction from any unregulated water source, including floodplain harvesting.

The 500% carryover rules proposed would lead to large account balances accruing, particularly as the time between floods increases due to climate change. ■■■ supports annual accounting with no carryover.

The initial allocation and the annual allocation should be no more than 1 ML per share (dependent on antecedent conditions).

■■■ supports strong amendment provisions for all floodplain harvesting management rules to enable rule changes without triggering compensation.

Trading

■■■ does not support the trading of floodplain harvesting entitlements.

Trading floodplain harvesting entitlements risks the concentration of works within catchments, as the large irrigators inevitably buy out the smaller irrigators. Such concentration would exacerbate the existing risks to environmental and cultural assets downstream.

Such trading activity would also add complexity and difficulty to the job of NRAR in policing that floodplain works that have sold the associated access licence have been flattened.

Protection of Environmental Water

All commonwealth tax payer owned environmental water released in Queensland for the purposes of creating environmental benefit should be protected from floodplain harvesting diversion when it crosses the border into NSW.

Floodplain Works

There should be no floodplain harvesting access licences issued for the Barwon-Darling water source until all unapproved floodplain works (in particular 'hot spot' works) have been flattened or modified.

There should be no floodplain harvesting occurring in Floodplain Management zones A and D.

Floodplain Management zones A and D cover environmentally and culturally important assets. Instead of the current proposal to simply cap any new floodplain harvesting works in these zones, there should be no allowable floodplain harvesting in these zones.

The Report to Assist Community Consultation on page 18 states that "*approximately 90% of properties that will receive a floodplain harvesting (unregulated river) access licence have a work located within management zones A or D*". ■■■ is concerned about the number of floodplain harvesting works in zones A and D, and proposes that should floodplain harvesting not be allowed in these two zones, that may go a long way towards reducing the proposed licencing volume from 51.32 GL to 16.5 GL.

Natural lagoons and drought refuge pools should never be used for floodplain harvesting.

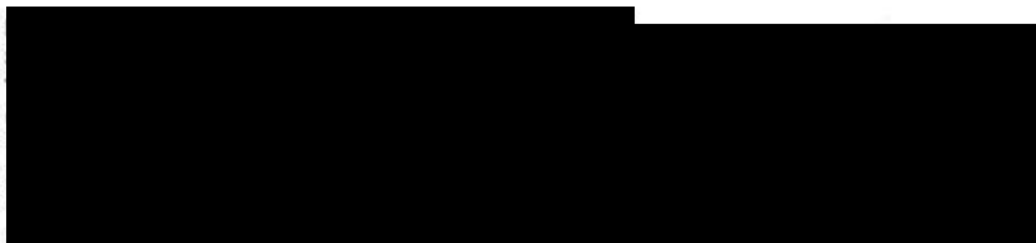
'Hotspot' floodplain works that disrupt natural flows should not be considered for floodplain harvesting licences. Floodplain works that have not been assessed should not be considered for floodplain harvesting licences.

Access Rules

The flow targets in the Barwon Darling Water Sharing Plan used to trigger floodplain harvesting access must be based on the long term water requirements, and the Menindee Lakes target should be no less than 450 GL.

■■■ supports the use of flow targets to trigger floodplain harvesting access. However the flow targets must be aligned with the principles of the Water Management Act 2000. The proposed figures in the Barwon Darling water sharing plan do not align with those principles.

ICACs' *Investigation into complaints of corruption in the management of water in NSW and systemic non-compliance with the Water Management Act 2000*⁵ found a culture with the Department of staff favouring industry when developing policy, and seeing First Nations and the environment as enemies. The email below was obtained through Parliament in late June 2022 via Standing Order 52 Order for Papers⁶



Hi ■■■

As discussed, first up, I think that its important that the Minister understands that there is nothing in the new regulations which offends (or prevents us from addressing) the recommendations in the recent Select Committee report. However, in contrast there are many of the inquiry recommendations that simply cannot be achieved without these regulations. If faced with criticism about pushing ahead with regulations because they don't take on board the inquiry recommendations, he may wish to point this out. There are however some things that the Minister could possibly do through WSP rules, to better address some of the key concerns raised through the inquiry that relate to water sharing - should he wish to. I believe that there is a very small window where we could do this without delaying the proposed 1 July commencement of WSPs for Border/Gwydir and Macquarie Valleys. Essentially, I think that we would need to have clear instruction from the Minster by the end of Feb to pull this off (the earlier the better of course). I have summarised what I consider to be the most useful of these changes below, with some of the most prominent pros and cons I can think of for each (in blue).

1. Downstream flow targets - include rules that prevent floodplain harvesting access when there are downstream critical human and environmental needs (we would propose using the draft s.324 triggers now published on our website. FYI - ■■■ has developed alternate targets that do not have a strong technical basis and that we consider will not address stakeholder concerns or inquiry recommendations - accordingly, I recommend that they are not pursued).

Pros

⁵ [ICAC 2020 Investigation into complaints of corruption in the management of water in NSW and systemic non-compliance with the Water Management Act 2000](#)

- It would directly address one of the inquiry recommendations (probably the key one for many stakeholders that are currently opposing the reform)
- It will improve the social licence of FPH (as FPH cannot occur when there are downstream critical human or environmental needs)
- It is unlikely to reduce FPH take overall - it will shift extraction into wetter periods but not decrease the volume taken over the long term
- It will likely generate within valley environmental and social benefits following dry periods, when water is most scarce (based on expert opinion)
- It will strengthen the case that the Minister is taking all reasonable steps to comply with the WMA 2000 (a legal challenge on these grounds is considered likely)

Cons

- Restricting FPH access during these conditions may prolong drought recovery for the industry and regional communities
 - It is unlikely that these rules would significantly improve critical human/environmental needs in the Barwon-Darling and beyond - any benefit will likely be at the margins
2. Initial allocations - include rules that limit 1st year allocations for FPH licences to 100% for all valleys.

This communication shows [REDACTED] suggesting that flow targets to trigger floodplain harvesting be included in the draft water sharing plans. Dan explains that using flow targets may give the appearance that the Minister is taking reasonable steps to comply with the Water Management Act 2000, while assuring the Minister that these particular flow targets are low enough that it's unlikely they would cause any significant improvement to critical human/environmental needs in the Barwon Darling and beyond. He also clarifies that these flow targets will likely not reduce floodplain harvesting take in the long run, presenting that fact in the 'Pro' list. [REDACTED] speaks of a likely legal challenge.

The following brief developed by [REDACTED] (also obtained through Parliament) states that the draft flow targets:

- are too low to protect key environmental assets outside of extreme dry periods
- do not adequately consider the long-term health of environmental assets
- do not support the water management principles of the Water Management Act

response to the Select Committee on Floodplain Harvesting. They prevent floodplain harvesting access when there is less than 195GL being stored in Menindee Lakes, until local in-catchment targets are forecast to be met. The proposed targets are based primarily on ensuring critical stock and domestic, and environmental needs are met during and following extreme dry periods.

- Once the flow targets are met (several hundred kilometres away from Menindee Lakes), the take of water from the floodplain is allowed regardless of the storage level in Menindee Lakes. There is also no temporal element to the flow triggers in their current form. Contrary to the intent, the current drafting means that they may only need to occur once in 10 years to be met.
- **EHG considers the proposed in-catchment targets to be too low to protect key environmental assets outside of extreme dry periods, and do not:**
 - **adequately consider the long-term health of environmental assets.**
 - consider environmental water requirements defined in the Border Rivers and Gwydir Long Term Water Plans.
 - support the priorities and actions in the NSW Water Strategy.
 - **support the water management principles of the WM Act.**
- To address this issue EHG has developed alternative interim flow targets for these plans based on the environmental water requirements in the Long Term Watering Plans.
- The objective in proposing these flow targets is to ensure environmental water requirements that can only be met by naturally occurring events (i.e., they cannot be met by held environmental water) are protected by the plans. This aligns with the priorities for water sharing in the WM Act.

█ notes that a legal challenge is likely on the grounds that the principles of the Water Management Act are being seen to be compromised. And yet █ recommends this course of action to the Minister. The NSW Environment and Heritage Group confirms that in their opinion the flow targets are not aligned with the principles of the Water Management Act.

█ expects that public servants do not recommend Ministers take actions that could potentially offend against the law.

█
█



Fwd: Flood Plain Harvesting is killing our rivers

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Fri 8/07/2022 3:53 PM



Get [Outlook](#) for iOS

From: [Redacted]

Sent: Friday, July 8, 2022 12:35:02 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Flood Plain Harvesting is killing our rivers

To Whom it may concern,

I totally object to the NSW Govt Licencing Floodplain harvesting from the Barwon / Darling catchment. The amount of water to be licenced is no improvement on the past water harvesting take, which was illegal. The Murray River is being forced to supply more water down to SA, this is not sustainable especially during dry years.

The Menindee Lakes system has been suffering for several years, resulting in tragic losses of biodiversity and habitat, as well as human water needs.

Human water includes all community including First Nations people, recreation and fishers, farmers, and people who love the river.



[http://] I acknowledge the traditional Aboriginal owners of Country throughout Victoria and pay my respects to them, their culture and their Elders past, present and future.

Help us secure native habitat forever

You can help protect Victoria's native flora and fauna by making a donation to [Redacted]



This email and any attached files is for the intended recipient only. If that is not you, please let the sender know and delete this email. This email may be subject to legal professional privilege and cannot be read, printed, copied, circulated or the content relied on or used. We do not wish to send viruses – please check the email before opening or sending it.



Submission: Barwon-Darling Floodplain Harvesting (FPH) Rules

BACKGROUND:

The Darling River was identified by the Natural Resources Commission as suffering ecological collapse during recent intense drought conditions and is recognised nationally by the general public as an ecological disaster. This disaster has occurred despite our national effort to secure the health of our Murray Darling Basin rivers and to finally address over extraction. The Barwon Darling Catchment has had a hugely detrimental impact on the health of the whole Basin and is undermining community belief in government's ability to manage our water resources fairly and sustainably.

The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL (gigalitre = 1 billion litres) to FPH extraction. This volume was used in the development of the Murray-Darling Basin Plan. The proposed new entitlements are above this volume, which is unacceptable, particularly given extraction from the Barwon-Darling has breached the Basin Plan Sustainable Diversion Limit in 2019 and 2020.

We know that climate change was not accounted for in this Basin Plan. NSW has breached the Cap on numerous occasions and is the worst state by far in cap compliance. Inflows to the Basin are declining as a result of climate change, diminishing the water resource considerably. Now is not the time to be increasing take.

As a Victorian irrigator and healthy rivers advocate I feel it is time NSW government complied with the spirit of the Basin Plan and acknowledge its responsibilities to other states and our nation. It's time to play fair.

SPECIFIC COMMENTS:

VOLUME

- The volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares), as identified in the Community Assistance Report. This differs greatly from the figures used in the models and is therefore unacceptable and no evidence to suggest it is sustainable or without unaccounted ecological damage.
- There is insufficient evidence that the new proposals for Floodplain harvesting in the Barwon Darling will keep extraction below legal limits of the Basin Plan.
- Rainfall runoff must not be exempt and must be accounted for like all other forms of take in the Basin.

ACCOUNTING RULES

- I do not support 500% carryover – will cause loss of key flood flows for downstream benefits to wetlands, cultural values, and groundwater recharge, basic rights, and town water supply.
- I support annual accounting with no carryover – there is no rationale for this causing larger entitlements other than faulty policy favoring history of use
- Support that initial allocation is 1 ML unit share or less depending on antecedent conditions

TRADING

- I do not support any trading of FPH entitlement – it is likely to cause environmental and cultural damage – this fails to meet the requirements of trading rules.

FLOODPLAIN WORKS

- There should be no works in Floodplain Management Plan Zone A and D should be licensed to take FPH
- No lagoons or natural drought refugia should be licensed to take FPH.
- It is imperative that no FPH works licenses should be granted until all unapproved and floodplain ‘hotspot’ works are removed or modified.

ACCESS RULES

- Support no access under resumption of flow rules – these must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi, Macquarie
- I strongly object to no FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia. This offers no drought protection and will cause ecological damage. A target of 450 GL in Menindee is needed with higher forecast upstream flows.

PROTECTION OF ENVIRONMENTAL WATER

- Rules must protect held environmental water inflows from Queensland and NSW northern tributaries.

AMENDMENTS

- Support strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation. With the incredible value of water as an asset in 2022, it is completely unfair to make a new entitlement compensable.

██████████

██████████████████

██████████ ██████████

██████████

Submission on the Barwon-Darling Floodplain Harvesting (FPH) Rules

██████████
██████████
██████████
Friday 8 July 2022

As a wetland and floodplain ecologist I have seen firsthand the devastating impacts that water extraction and river regulation have on the biodiversity and productivity of aquatic ecosystems. Any rules that are developed to manage the impacts of water extraction on aquatic ecosystems must consider the potential future impacts of climate change and must ensure that no further degradation occurs. They should aim to restore natural hydrological regimes to ensure that both natural ecosystems and human communities can thrive.

I would ask you to consider the following points when formulating FPH Rules for the Barwon-Darling:

- The volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares), as identified in the Community Assistance Report. This differs greatly from the figures used in the modelled scenarios. There is no confidence in the information provided for FPH assessment or proposed entitlement in the Barwon-Darling River.
- Do not support that new FPH licenses will keep extraction below the Plan Limit
- Do not support the rainfall runoff exemption – this is free water that must be accounted for
- Do not support 500% carryover – will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply.
- Support annual accounting with no carryover – there is no rationale for this causing larger entitlements other than faulty policy favoring history of use
- Support that initial allocation is 1 ML unit share or less depending on antecedent conditions
- Support that annual allocation is 1 ML unit share or less, as above
- Do not support any trading of FPH entitlement – it is likely to cause environmental and cultural damage – this fails to meet the requirements of trading rules
- No works in Floodplain Management Plan Zone A and D should be licensed to take FPH
- No lagoons or natural drought refugia should be licensed to take FPH
- No FPH works licenses should be granted until all unapproved and floodplain ‘hotspot’ works are removed or modified.
- Support no access under resumption of flow rules – these must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi, Macquarie
- Strongly object to no FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia. This offers no drought protection and will cause ecological damage. A target of 450 GL in Menindee is needed with higher forecast upstream flows.
- Rules must protect held environmental water inflows from Queensland and NSW northern tributaries.
- Support strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation

[REDACTED]

[REDACTED]

Submission to the NSW Government on the draft rules for floodplain harvesting licences to be included in the *Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012*

8 July 2022

Introduction

The [REDACTED] and the [REDACTED] welcome the opportunity to comment on the proposed rules for the floodplain harvesting (FPH) access licences in the Barwon-Darling under the *Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012* (WSP). We do not make submissions regarding other proposed changes to the WSP.

We recognise the progress made on these much needed reforms to ensure all forms of take are licenced, metered and brought into a compliance framework based on diversion limits. We also appreciate that the proposed reform is aimed at reigning in the growth of FPH diversions that have occurred since implementation of the 1993/94 valley-wide Cap on diversions.

Conferring permanent property rights to irrigators is a windfall transfer of public wealth that should be considered only once public good outcomes can be guaranteed, including for Aboriginal Nations who are disproportionately disadvantaged under the current policy settings. Specifically, this requires guarantees that the licences issued will not impact expected outcomes under the *Water Management Act 2000* (WMA 2000) the *Water Act 2007* and *Basin Plan 2012* for affected communities and the environment within each valley and in downstream connected systems.

Last year, the NSW Independent Commission Against Corruption (ICAC) reported on systemic failures to uphold elements of the WMA 2000 notably sections 5(3) and 9, which require ecosystem health and basic landholder rights to take precedence over irrigation. Furthermore, the complexity of management of FPH events, combined with limited public information about the location and legal status of floodplain structures, lack of historically metered diversions, lack of independent expert review of the actual model nor accreditation of this model, and different FPH take estimates in various reports, means there is much uncertainty and significant risks to water management outcomes. Effective and enforceable safeguards are needed to ensure outcomes expected under these reforms will be achieved.

We recommend the following safeguards are in place for managing FPH access:

- Active management rules embedded in access licence conditions are based on best available evidence to ensure that water in the Barwon-Darling will be prioritised for environmental purposes, basic landholder rights and cultural purposes within the valley and downstream. We recommend the rules in Appendix 1. (Recommendation 1).
- Access licence conditions must require all floodplain works to act as 'transparent structures' during restricted periods so they do not to impede or harvest flows which would have otherwise

contributed to valley-wide or downstream outcomes. This should be audited for compliance. (Recommendation 2).

Why these safeguards are necessary

Long term FPH take limits do not provide for effective protection and management of environmental flow events during periods of overbank flow so they can achieve their intended benefits within the Barwon-Darling. Adequate protection and management of environmental flow is a recommendation of the Matthews report¹, a requirement of the Murray-Darling Basin (MDB) Compliance Compact (see s5.3 therein), and is necessary to give effect to the Environmental Watering Plan (Chapter 8 of the Basin Plan) and the Basin-wide environmental watering strategy as required by s10.26 of the Basin Plan. It is also necessary in some instances to protect priority environmental assets and priority ecosystem assets, as per s10.17 of the Basin Plan.

The Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event² showed the importance of active management to achieve flow targets by providing for “much needed outcomes for communities in need... and re-start[ing] the Lower Darling River without fish kills or blue-green algae outbreaks” (p. 4). The report recommended embedding embargos within a policy framework with agreed triggers that are independent of discretionary embargoes in order to increase transparency, provide certainty around critical water needs in extreme events and build trust with Traditional Owners, communities and water users. The report also recommended implementing individual daily extraction limits (IDELs) for licence holders.

Recommended changes to the proposed FPH access rules

- **Recommendation 1. Active management rules embedded in access licence conditions are based on best available evidence to ensure that water in the Barwon-Darling will be prioritised for environmental and human purposes. We recommend the rules in Appendix 1.**

Rules that provide for active management of overbank flow events are required to guarantee outcomes in line with the long term water plan (LTWP) objectives, water sharing plan (WSP) objectives, WMA 2000 and the Basin Plan. We strongly recommend FPH access rules which provide adequate protection of planned environmental water (PEW) and held environmental water (HEW) and will protect higher priority needs for environmental and human purposes.

We support the NSW Government’s consideration of flow access rules to protect important flows from floodplain harvesting in the Barwon-Darling and other valleys of the NSW Murray-Darling Basin. Establishing flow targets for floodplain harvesting is essential for ensuring that environmental and downstream needs of the rivers and communities are met before floodplain extraction can occur. They also provide the public with confidence that irrigation can occur without compromising

¹ Matthews, K, (2017) Independent Investigation into NSW Water Management and Compliance. NSW Department of Industry. Available: https://www.industry.nsw.gov.au/__data/assets/pdf_file/0019/131905/Matthews-final-report-NSW-water-management-and-compliance.pdf

² Craik W & Claydon G. 2020. Independent Panel Assessment of the Management of the 2020 Northern Basin First Flush Event. NSW Department of Planning, Industry and Environment. Available: https://www.industry.nsw.gov.au/_data/assets/pdf_file/0007/321649/final-report.pdf

essential water needs for the river and its people. In this way, and if done well, they are a tangible means of protecting NSW's water-dependent natural capital.

However, we are concerned that the targets currently proposed are inadequate for achieving this outcome:

- There is only one condition that restricts floodplain harvesting; this condition is only triggered in very dry conditions and will not protect higher priority local needs at any other time.
- The 195 GL target at Menindee Lakes is inadequate to meet the water needs of the Lower Darling.
- Local targets are inadequate to meet local higher-priority water needs.

██████████ has summarised in a brief (Attachment 1), the specific flows and pulses that these targets will fail to protect, and their importance. Adverse knock-on effects will occur if the currently proposed flow targets are not improved. These effects include a failure under the WMA 2000 to comply with the 'priority of use' requirements to protect water resources and their dependent ecosystems.

We recommend the following specific rules (see Appendix 1 for details):

1. Flow targets on the Barwon-Darling as downstream triggers for FPH access in the Barwon-Darling (see Attachment 2) that reflect LTWP requirements in the Barwon-Darling, and targets in the Interim Unregulated Flow Management Plan for the North West;
2. Minimum flows at all times that reflect LTWP water needs at key sites along the Barwon-Darling. These flow targets must reflect flow regimes needed to maintain the ecological character of Ramsar-listed wetlands;
3. Limit on volume taken; and
4. Individual daily extraction limits (IDELs) and total daily extraction limits (TDELs) to protect PEW and HEW.

These rules would ensure the taking of any water under floodplain harvesting access licences would only be permitted when the uncontrolled flows at the point of extraction are in excess of that required to meet agreed objectives, including cultural objectives and those specified in the LTWP. This recommendation expands on the supplementary water take settings which include requirements of the Interim Unregulated Flow Management Plan for the North West (IUFMPNW) to be met through Section 324 orders. We recommend that the triggers need to be clearly specified in the WSP and in licence conditions, rather than being discretionary Ministerial decisions as currently proposed.

Determining expected achievement of these flow conditions should be based on best available science and data. Stream flow values from modelling used to determine likelihood of downstream flow rate achievement should be published at the time of decision making.

Non-discretionary volumetric triggers to manage upstream access allows for the protection of connectivity of flow events through the system which would otherwise not be possible under the current settings. The triggers create clarity, certainty and consistency for the achievement of outcomes in downstream communities during FPH events. The approach is critical under likely climate change conditions with more variable flows to ensure some water will be guaranteed to reach downstream sites. This is needed to manage uncertainty and risks because water availability is

likely to be different in reality from modelled scenarios which don't incorporate climate change projections.

- **Recommendation 2. Access licence conditions must require all floodplain works to act as 'transparent structures' during restricted periods so they do not to impede or harvest flows which would have otherwise contributed to valley-wide or downstream outcomes. This should be audited for compliance.**

During restricted periods, all floodplain works should be able to be temporarily modified so they act as transparent structures that do not impede or harvest flows which would otherwise contribute to valley-wide or downstream outcomes. This could be achieved by modifying structures with culverts or regulators which can be switched on and off. No structures should be attached to a FPH water licence unless they meet this condition.

Appendix 1. Proposed access rules for FPH water access licences. These requirements should be stated in the WSP and as a condition specified on the licence.

Access Rule	Description
Flow targets in the Barwon-Darling	This rule restricts FPH access, when required, to ensure outflows contribute to meeting flow targets specified for the Barwon– Darling Unregulated River Water Source. This rule is part of an overarching suite of rules designed to improve connectivity between the northern valleys and maintain flows into the Barwon–Darling. These minimum targets should be based on flows required by the LTWP, the Interim Unregulated Flow Management Plan for the North West (IUFMPNW) and other agreed flow targets for the Barwon-Darling (including in relation to cultural requirements, which must be determined on the basis of input from Aboriginal groups). Attachment 2 describes the LTWP targets and Box 1 details the IUFMPNW flow targets for the Barwon–Darling Unregulated River Water Source.
Minimum flow at key gauges which reflect LTWP water needs and cultural needs at key sites	This rule provides for the maintenance of minimum flows at key gauges in the Barwon-Darling during overbank flow events. Minimum flows should reflect the volume of water needed to satisfy valley-wide flow targets specified in long-term watering plans for a range of flow objectives, as well as cultural needs. The goals of this rule are to improve low flows at the end of the system and ensure LTWP objectives and cultural objectives are satisfied throughout the valley under a range of flow conditions. These flow targets must also reflect flow regimes needed to maintain the ecological character of Ramsar-listed wetlands.
Limit on volume taken	This rule limits the amount that can be taken under FPH access licences to a proportion (%) of the overbank flow in each event to protect environmental and cultural outcomes dependent on overbank flow events.
IDELs and TDELs to provide for active management	Total daily FPH extraction limits and individual daily FPH extraction limits to provide for the protection of environmental water and active management of PEW and HEW.
NOTE: These rules should be active at all times of FPH access, not only when a supplementary water announcement has been made (as the current policy proposes).	

Box 1: Interim Unregulated Flow Management Plan for the North West (IUFMPNW) flow requirements

The IUFMPNW prescribes minimum target flow rates at key locations along the Barwon-Darling to provide for riparian flows, algal suppression, fish migration and basic landholder rights. The flow requirements are:

- (a) a flow of 14,000 ML/day in the Darling River at Brewarrina for five consecutive days, or 10,000 ML/day in the Darling River at Bourke for five consecutive days, during September to February inclusive, providing two such flow events have not already occurred during that period in that water year,
- (b) a flow of 2,000 ML/day in the Darling River at Wilcannia for five consecutive days during October to April, inclusive, providing flows of this quantity have not already been reached during the preceding three months within the October to April period, and
- (c) a flow of:
 - (i) 150 ML/day in the Darling River at Wilcannia,
 - (ii) 280 ML/day in the Darling River at Louth,
 - (iii) 390 ML/day in the Darling River at Bourke,
 - (iv) 550 ML/day in the Darling River at Brewarrina,
 - (v) 700 ML/day in the Barwon River at Walgett,
 - (vi) 760 ML/day in the Barwon River at Collarenebri, and
 - (vii) 850 ML/day in the Barwon River at Mungindi.

[REDACTED]

[REDACTED] is an independent group of scientists and professionals, working to secure the long-term health of Australia's land, water and biodiversity.

[REDACTED]

[REDACTED]

[REDACTED] is a community legal centre specialising in public interest environmental law. [REDACTED] represents and collaborates with a diverse range of clients including floodplain graziers, conservation groups and Indigenous groups in relation to freshwater issues across Australia including in the Murray-Darling Basin.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

NSW Government's floodplain harvesting targets prioritise irrigation extraction over needs for communities and river health

20/06/22

The NSW Government recently announced [flow targets](#) to protect first flush and critical low flows from being extracted by floodplain irrigators. However, the targets the NSW Government has proposed are set so low that they will never meaningfully restrict floodplain harvesting and will fail to ensure that water for river health and community needs are prioritised above irrigation, a requirement of the *NSW Water Management Act 2000*.

Flow targets have been established to protect higher priority water needs in parts of NSW for decades. Some Water Sharing Plans use flow targets to protect baseflows from extraction while the resumption of flow rule, and Interim Unregulated Flow Management Plan for the North-West (Barwon-Darling) use flow targets to protect flows on an event-by-event basis.

Flow targets in the context of floodplain harvesting are a set of triggers at specified gauges which represent the river flow rates needed to meet environmental and community needs during unregulated flow events. These triggers turn on and off, restricting and allowing extraction depending on whether the higher priority needs have been satisfied. Floodplain extraction is permitted once it is known that the flow targets will be met. The targets are not flow volumes that must be delivered from public dams or through river management, they are the flow conditions which trigger access to unregulated flows. In this way, floodplain harvesting targets protect a portion of flushing flows needed to sustain river health and downstream communities while allowing floodplain extraction when higher priority needs have been met.

Establishing flow targets for floodplain harvesting is essential for ensuring that environmental and downstream needs are met before irrigation extraction can occur.

However, the proposed targets do not set aside a portion of flushing flows needed to sustain river health and community needs; flows which would have otherwise occurred in the absence of floodplain harvesting. These flows include:

- Bankfull and overbank: higher flows that are needed to prevent the drying out of floodplain environments to maintain and rejuvenate Ramsar wetlands, support Aboriginal cultural values, sustain flow-dependent ecosystems and reduce toxic blackwater events;
- Small and large freshes: pulses of medium-sized in-channel flows that are needed to replenish and connect waterholes and weir pools, provide spawning cues for native fish, and reduce risks of blue-green algal blooms; or
- Baseflows: low in-channel flows essential for ensuring the rivers can flow, safeguarding against mass fish deaths and providing safe and clean drinking water for downstream communities.

Without improvement of the proposed flow targets, the floodplain harvesting policy:

- fails to achieve the objectives of the *Water Management Act 2000* to protect water resources and their dependent ecosystems;
 - does not comply with the *Water Management Act 2000* 'priority of use' requirements;
 - leaves held and planned environmental water vulnerable to extraction;
-
- [REDACTED]
- [REDACTED]
- [REDACTED]

- allows floodplain irrigators to extract water while communities downstream might not have access to clean drinking water or water to bathe in;
- further disenfranchises Aboriginal people’s access to water;
- will continue to threaten a broad range of species and ecological communities; and
- continued alteration of natural flow regimes and alienation of floodplains and wetlands from rivers will directly result in new listings of threatened ecological communities and species under the *Biodiversity Conservation Act 2016*.

NSW Government needs to improve flow targets to provide public confidence that irrigation can occur without compromising the essential water needs of the river and its communities.

Specific issues

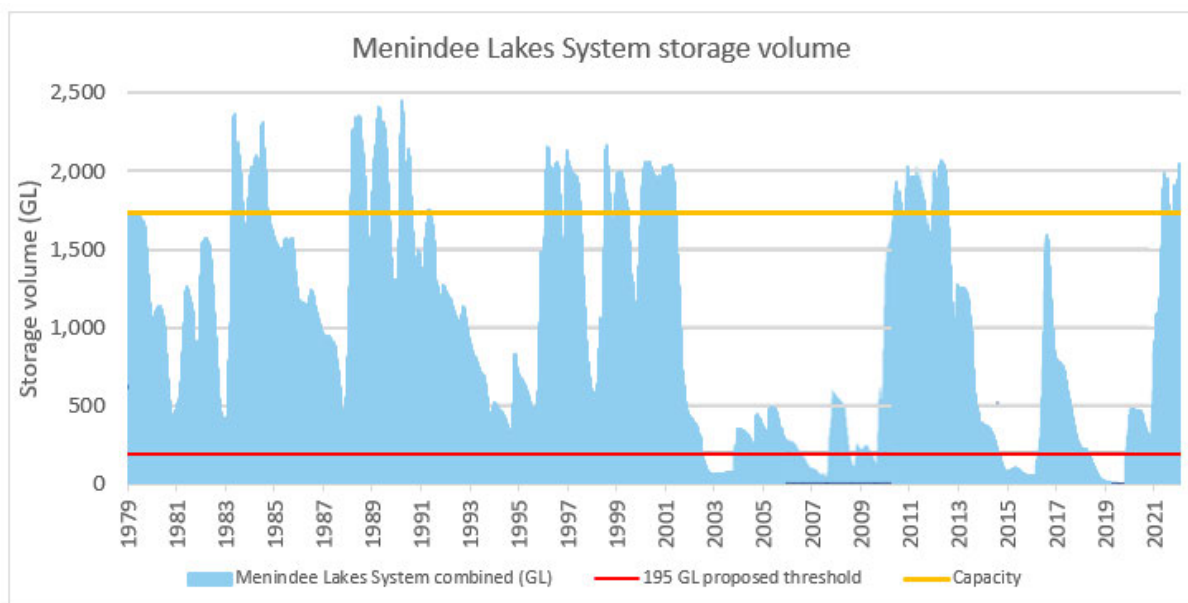
The proposed targets restrict take only if the volume of water in the Menindee Lakes system falls below a certain threshold (the ‘restriction condition’). This restriction on take will cease if any of the low level flow targets proposed for individual rivers by the NSW Government are met (the ‘allowing conditions’).

Issue 1: There is only one condition that restricts floodplain harvesting, this condition is only triggered in very dry conditions and will not protect higher priority local needs at any other time.

Floodplain harvesting would only be restricted if the volume of water held in the Menindee Lakes System falls below 195 GL (red line in figure below).

Over the past 43 years the volume of Menindee Lakes has only been recorded below 195 GL six times, always during extreme droughts. Between 1979 and 2002 the Menindee Lakes never fell below this level. After 2002, the volume stored in Menindee Lakes regularly fell below 195 GL, largely due to over-extraction upstream and changes in lake management practices.

As a consequence, the proposed restriction condition would be rarely triggered and will be ineffective in protecting higher priority local needs in most years.



Adapted from [Draft regional water strategy: Western – Critical dry condition triggers 2022](#).

Even when valley-wide restrictions on floodplain harvesting have been triggered by Menindee falling below 195 GL, the restriction within a valley ceases if a small flow triggers the very low 'allowing condition' in each valley (discussed further in issue 3). This is the case even in extreme or prolonged drought events. The consequence is that floodplain harvesting would be permitted upstream when there is insufficient water supply for the Lower Darling environment and communities from the Menindee Lakes.

The proposed approach contains only one restricting trigger but many allowing triggers. This approach is less effective than the existing resumption of flow rule in the Barwon-Darling which contains restricting and allowing triggers at multiple locations within the valley. Local restriction triggers are needed so that local conditions determine if local high-priority environmental and community needs must be met before floodplain harvesting is allowed.

Issue 2: The 195 GL target at Menindee Lakes is inadequate to meet the water needs of the Lower Darling.

The volumetric target at Menindee represents critically low storage conditions and, after taking into account up to 125 GL of inaccessible 'dead' storage in the Menindee Lakes System, the target results in less than 12 months-worth of emergency supply, with no allocation for lower Darling communities.

It is not clear if the 195 GL target has appropriately considered total inaccessible storage, transmission losses through the system, increased evaporation during drought periods when this target is activated, or the additional volumes of water needed to restart the Lower Darling River once it has ceased flowing.

The proposed volume is almost 2.5 times less than the 480 GL of water available in the Menindee Lakes just 12 months before the mass fish kills occurred in the summer of 2018-19. It is only by improving lake management and protecting at least two summers supply (i.e., 18 months) that a repeat of the massive fish kills could be avoided during the next dry period.

Issue 3: Local targets are inadequate to meet local higher-priority water needs.

As discussed above, even when valley-wide restrictions on floodplain harvesting have been triggered by Menindee falling below 195 GL, the restriction within a valley ceases if a small flow triggers the very low 'allowing condition' in each valley.

Currently, the proposed targets are specified as a total volume and lack any duration. Accordingly, they are almost meaningless and assumptions must be made to understand the potential impact of the targets. It is not clear how these flow targets were determined or if they were based on established science. Table 1 shows that the targets at most sites are so low that at best they protect a small fresh and at worst they fail even to protect a baseflow. Any higher priority water needs that require flows above these rates including large freshes, bankfull or overbank flows, or for longer durations, will not be protected by the proposed targets.

Additionally, even when assuming the targets are met within 5 days, the resulting flows are generally much lower than the measured average flow for each site over the historical record. Finally, these targets are substantially lower than the Barwon-Darling resumption of flow targets and the [targets proposed by the Department](#) to the Connectivity Stakeholder Reference Group.

Table 1. Comparison of local flow targets with measured average flows and science-based flow requirements.

Location	Local flow targets proposed by NSW Government ¹ (ML/d)			Measured average flow ² (ML/d)	Flows required for environmental outcomes ³ (ML/d)				
	assuming 30 days	assuming 10 days	assuming 5 days		Baseflow	Small Fresh	Large Fresh	Bank full	Overbank
Barwon River at Mungindi	100	300	600	1,500	160	540	3,000	7,900	10,000
Carole Creek near Garah	23	70	140	200	70	200	900		2,000
Gingham Channel Teralba	33	100	200	225	50	250	1,000		
Gwydir d/s Tyreel Offtake	33	100	200	200	50	250	800	3,500	
Mehi near Collarenebri	13	40	80	275	40	90	800		
Namoi River at Walgett	10	30	60	1,800	30	200	2,250	8,500	10,600
Warren weir	167	500	1,000	1,850	200	450	4,000		12,000
Wilcannia	133	400	800	5,700	350	1,400	14,000	25,000	30,000

¹[NSW Government's rules for floodplain harvesting licences to protect first flush flows](#) assuming specified durations,

²calculated using daily timeseries from [NSW water monitoring network](#), and ³environmental flow requirements specified in [NSW Long-Term Watering Plans](#).

The proposed flow targets represent only low flows. Flow targets must be implemented that protect a range of essential flows (e.g., flows to protect drying floodplains, water for fish passage and wildlife refuges, flow-dependent communities and cultural values) during moderate to wetter years.

Recommended improvements to flow targets

For flow targets to be effective they must protect high-priority flow requirements for within-valley and downstream environmental and community needs. This includes legislative responsibilities for key wetland sites, such as Ramsar sites, threatened species and communities and water needs for communities, such as those along the Darling as well as First Nations peoples.

Flow targets should be underpinned by best available scientific information. We recommend those set out by the NSW Government as environmental water requirements in Long-term Watering Plans. At least one target should be specified for each valley, across all flow thresholds, not just baseflows after extended drought. A portion of all flow regimes from baseflows up to bankfull and overbank flows need to be protected from extraction in each valley to ensure connectivity of flushing flows represented by these higher flow regimes.

Finally, all local flow targets must act as both a restricting and permitting condition in conjunction with the Menindee Lakes target. This ensures local conditions are used to determine the trigger at which floodplain extraction can commence and that local high priority water needs are first met. The restricting conditions should be based on whether each flow regime has occurred in a pre-defined period of time which should be set based on best available scientific information (Table 2). Further, these targets need to have a specified period for review and adjustment of policy to ensure management outcomes are being achieved, given the current poor information base and the need for improved scientific information.

Table 2: Example showing how flow targets can be applied in the context of floodplain harvesting. Floodplain harvesting access is dependent on whether flow target conditions have been achieved. If flow targets have not been met within the required timeframe, floodplain harvesting is restricted (orange, red) until the target is achieved. When a target is met (green), floodplain harvesting is permitted.

Flow outcome	Flow component	Example flow target (based on best available science of water requirements)	Flow target achievement (based on observed data)
Native fish species	Baseflow	160 ML/d for 220 days, 100% of years at X gauge	Achieved – FPH permitted
	Small fresh	540 ML/d for 10 days, 100% of years at X gauge	At risk of not being achieved – FPH not permitted
	Large fresh	3,000 ML/d for 15 days, 75% of years at X gauge	Not achieved – FPH not permitted
	Bankfull	7,900 ML/d for 5 days, 50% of years at X gauge	Not achieved – FPH not permitted
	Overbank	13,000 ML/d for 5 days, 20% of years at X gauge	Not achieved – FPH not permitted
Waterbird species	Low flow	20 ML/d for 350 days, 100% of years at Y gauge	Achieved – FPH permitted
	Bankfull	40,000 ML/d for 5 days, 25% of years at Y gauge	At risk of not being achieved – FPH not permitted
	Overbank	60,000 ML/d for 1 day, 25% of years at Y gauge	Not achieved – FPH not permitted
Reed, swamps, grasses, and other aquatic plants	Baseflow	200 ML/d for 271 days, 100% of years at Z gauge	Achieved – FPH permitted
	Large fresh	4,000 ML/d for 14 days, 75% of years at Z gauge	Not achieved – FPH not permitted
	Bankfull	12,000 ML/d for 3 days, 50% of years at Z gauge	At risk of not being achieved – FPH not permitted
	Overbank	18,000 ML/d for 3 days, 50% of years at Z gauge	Not achieved – FPH not permitted
River red gum forests	Bankfull	8,500 ML/d for 5 days, 40% of years at W gauge	At risk of not being achieved – FPH not permitted
	Overbank	10,600 ML/d for 10 days, 30% of years at W gauge	Not achieved – FPH not permitted
Coolabah and Blackbox forests	Overbank	21,750 ML/d for 3 days, 50% of years at V gauge	Not achieved – FPH not permitted

recommended floodplain harvesting flow targets in NSW

Priority of use principles

The *Water Management Act 2000* specifies that the sharing of water must “protect the water source and its dependent ecosystems” as well as basic landholder rights (sections 5(3) and 9(1)).

These so-called “priority of use principles” do not only apply to critical and low flows but also to larger flows which are required to sustain the environment. For example, many important ecosystems are on floodplains and require regular overbank flows to protect them.

Floodplain harvesting is an opportunistic take of water which should only occur when there is a surplus. It is amongst the lowest priority forms of take and should only be taken when downstream water needs, including those of communities and the environment, are satisfied.

Environmental Watering Requirements

The Basin Plan required the NSW government to identify the volumes of water needed to sustain water sources and their dependent ecosystems across all NSW Murray-Darling Basin rivers.

These environmental watering requirements cover all types of flows, from cease-to-flow to overbank flows (see Figure 1). They are defined as a flow rate (in ML/day) over a duration of time (days) with an achievement frequency i.e., must occur in x % of years to achieve environmental outcomes.

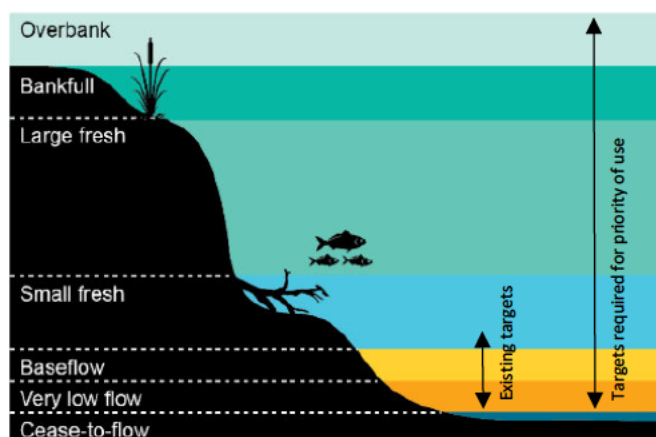


Figure 1: Types of flow regimes

Environmental watering requirements were developed by NSW government scientists based on “best available information from water managers, ecologists, scientific publications and analysis of gauged and modelled flows” to “be within the range of natural flow variability and seasonality” (Basin Plan 8.51(1)(d)).

Existing flow targets

Existing flow targets (i.e., resumption of flow rules, water sharing plan s324 orders, interim-unregulated flow management plan for the North-West, and the connectivity panel reference group) all relate to protecting only very low flow and baseflow and only after extended drought.

Recommendations for implementing floodplain harvesting flow targets

Environmental watering requirements should form the targets which determine if extraction will impact a water source and its dependent ecosystems. Where environmental water requirement achievement is below what is required, floodplain harvesting restrictions should be in place, as required by priority of use principles, to ensure environmental and community outcomes are protected.

All flow targets need to be embedded in each valley's water sharing plans as mandatory targets in the same manner as the resumption of flow rules.

Restrictions on take must be in place even if the flow will not “meaningfully contribute” to achieving the target. This protects wetting-up processes that create antecedent conditions which allow subsequent flows to achieve the environmental and community outcomes associated with the target.

Protections of any foregone water must be in place so that flow regimes are not extracted downstream.

Figure 2 shows the locations of recommended flow target sites and Table 1 lists environmental watering requirements for each site as well as the recommended flow targets for floodplain harvesting in NSW.

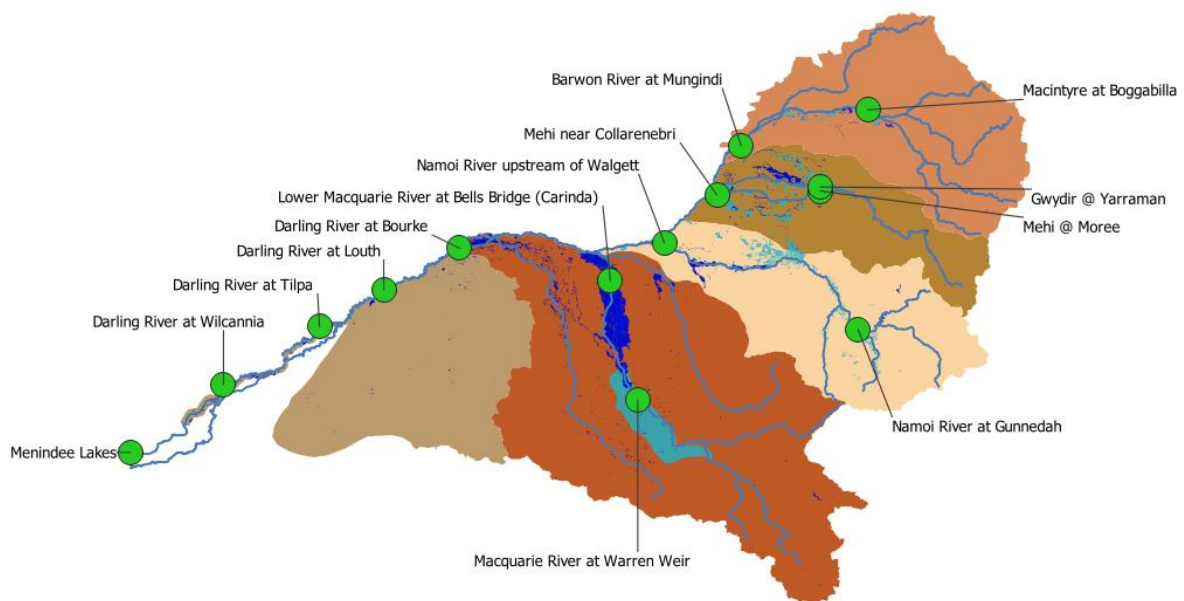


Figure 2: Map of the northern NSW floodplain valleys showing recommended floodplain harvesting target locations. Light blue areas represent major irrigation zones and dark blue areas represent NSW wetlands.

Table 1: Environmental watering requirements developed by the NSW government representing key flows, recommended floodplain harvesting flow targets are **bolded**.

	Location	Flow Type	Must occur in % of years	Environmental Watering Requirement
Barwon-Darling	Darling at Wilcannia	Very Low Flow	100%	30 ML/d for 340 days
		Baseflow	100%	350 ML/d for 290 days
		Small Fresh	100%	1,400 ML/d for 10-14 days
		Large Fresh	75%	14,000 ML/d for 15 days
		Bankfull	50%	25,000 ML/d for 15 days
		Overbank	30%	30,000 ML/d for 15 days
		Overbank	10%	43,000 ML/d for 15 days
	Barwon River at Mungindi	Very Low Flow	100%	45 ML/d for 310 days
		Baseflow	100%	160 ML/d for 220 days
		Small Fresh	100%	540 ML/d for 10 days
		Large Fresh	75%	3,000 ML/d for 15 days
		Bankfull	50%	7,900 ML/d for 5 days
		Overbank	30%	10,000 ML/d for 5 days
		Overbank	20%	13,000 ML/d for 5 days
	Overbank	10%	19,000 ML/d for 5 days	
	Darling River at Bourke	Very Low Flow	100%	105 ML/d for 325 days
		Baseflow	100%	500 ML/d for 275 days
		Small Fresh	100%	1,550 ML/d for 10 days
		Large Fresh	75%	15,000 ML/d for 15 days
		Bankfull	50%	30,000 ML/d for 15 days
		Overbank	30%	50,000 ML/d for 15 days
		Overbank	20%	62,000 ML/d for 15 days
	Overbank	10%	129,000 ML/d for 15 days	
	Darling River at Louth	Very Low Flow	100%	70 ML/d for 330 days
		Baseflow	100%	450 ML/d for 280 days
		Small Fresh	100%	1,500 ML/d for 10 days
		Large Fresh	75%	15,000 ML/d for 15 days
		Bankfull	50%	30,000 ML/d for 15 days
		Overbank	30%	44,000 ML/d for 15 days
		Overbank	20%	57,000 ML/d for 15 days
	Overbank	10%	125,000 ML/d for 15 days	
	Darling River at Tilpa	Very Low Flow	100%	60 ML/d for 330 days
Baseflow		100%	400 ML/d for 280 days	
Small Fresh		100%	1,450 ML/d for 10 days	
Large Fresh		75%	14,500 ML/d for 15 days	
Bankfull		50%	28,000 ML/d for 15 days	
Overbank		30%	41,000 ML/d for 15 days	
Overbank		20%	51,000 ML/d for 15 days	
Overbank	10%	120,000 ML/d for 15 days		
	Menindee	Water supply	100%	18 months' supply
Border Rivers	Macintyre River at Boggabilla	Very Low Flow	100%	25 ML/d for 347 days
		Baseflow	100%	230 ML/d for 217 days
		Small Fresh	100%	840 ML/d for 10-14 days
		Large Fresh	75%	3,100 ML/d for 5-10 days

		Bankfull	100%	10,900 ML/d for 3 days
		Anabranch	100%	10,900 ML/d for 13 days
		Overbank	30%	21,400 ML/d for 3 days
		Overbank	12%	60,000 ML/d for 3 days
Gwydir	Mehi River at Moree	Very Low Flow	100%	20 ML/d for 330 days
		Baseflow	100%	130 ML/d for 200 days
		Small Fresh	100%	345 ML/d for 10 days
		Large Fresh	75%	2,800 ML/d for 14 days
		Large Fresh	40%	10,000 ML/d for 5 days
		Overbank	10%	20,000 ML/d for 2 days
		Overbank	10%	30,000 ML/d for 2 days
	Gwydir at Yarraman	Very Low Flow	100%	20 ML/d for 350 days
		Baseflow	100%	130 ML/d for 200 days
		Small Fresh	100%	540 ML/d for 10-14 days
		Large Fresh	75%	4,860 ML/d for 14 days
		Large Fresh	40%	11,000 ML/d for 2 days
		Large Fresh	25%	40,000 ML/d for 5 days
		Bankfull	25%	60,000 ML/d for 2 days
	Mehi at Collarenebri	Overbank	10%	60,000 ML/d for 1 day
		Baseflow	100%	40 ML/d for 130 days
		Small Fresh	100%	100 ML/d for 10 days
		Large Fresh	100%	800 ML/d for 5 days
Namoi	Namoi at Gunnedah	Very Low Flow	100%	1 ML/d for 365 days
		Baseflow	100%	200 ML/d for 240 days
		Small Fresh	100%	600 ML/d for 10-14 days
		Large Fresh	75%	5,400 ML/d for 5 days
		Bankfull	30%	32,700 ML/d for 3 days
		Overbank	40%	40,000 ML/d for 2 days
		Overbank	33%	45,000 ML/d for 2 days
	Namoi River upstream of Walgett	Very Low Flow	93%	1 ML/d for 365 days
		Baseflow	93%	30 ML/d for 347 days
		Small Fresh	100%	200 ML/d for 10 days
		Large Fresh	75%	2,250 ML/d for 5 days
		Bankfull	40%	8,500 ML/d for 5 days
		Overbank	30%	10,600 ML/d for 10 days
		Overbank	25%	20,000 ML/d for 2 days
Macquarie	Macquarie at Warren Weir	Very Low Flow	100%	1 ML/d for 365 days
		Baseflow	100%	200 ML/d for 271 days
		Small Fresh	100%	450 ML/d for 10 days
		Large Fresh	75%	4,000 ML/d for 14 days
		Overbank	50%	12,000 ML/d for 3 days
		Overbank	50%	16,000 ML/d for 3 days
		Overbank	25%	18,000 ML/d for 3 days
	Lower Macquarie at Bells Bridge	Very Low Flow	96%	10 ML/d for 267 days
		Baseflow	96%	100 ML/d for 208 days
		Small Fresh	100%	140 ML/d for 10 days
		Large Fresh	75%	700 ML/d for 14 days
Overbank		75%	1,900 ML/d for 10 days	

in the modelled scenarios [REDACTED] feels that there is no confidence in the information provided for FPH assessment or proposed entitlement in the Barwon-Darling River.

[REDACTED] does not support that new FPH licenses will keep extraction below the Plan Limit, and if that is not done, the plan will fail.

Also, we do not support the rainfall runoff exemption – this is free water that must be accounted for in a measureable way.

With the accounting rules, [REDACTED] does not support 500% carryover as it will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply.

As far as trading goes, we do not support any trading of FPH entitlement – it is likely to cause environmental and cultural damage – this fails to meet the requirements of trading rules, which need to be set in place.

[REDACTED] does not want to see works in Floodplain Management Plan Zone A and D should be licensed to take FPH, equally we do not believe that lagoons or natural drought refugia should be licensed to take FPH. Also no FPH works licenses should be granted until all unapproved and floodplain ‘hotspot’ works are removed or modified.

[REDACTED] strongly supports no access rules under resumption of flow rules – these must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi, Macquarie.

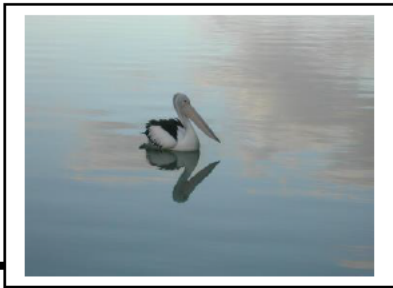
[REDACTED] also strongly objects to no FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia. This offers no drought protection and will cause ecological damage. A target of 450 GL in Menindee is needed with higher forecast upstream flows.

Protection of Environmental Water Rules must protect held environmental water inflows from Queensland and NSW northern tributaries, this is a mandatory need for biodiversity. [REDACTED] strongly supports strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation, this is a must.

Yours in trust,

[REDACTED]

[REDACTED]
[REDACTED]



[REDACTED]

Healthy Floodplains Project
NSW Department of Planning and Environment
Email: floodplain.harvesting@dpi.nsw.gov.au

8 July 2022

Submission on Barwon-Darling Floodplain Harvesting (FPH) Rules

I am writing to express deep concern that the process of developing a legal framework for previously unlicensed floodplain harvesting in the Barwon-Darling catchment will have the effect of allowing seriously unsustainable levels of take, with grave economic, environmental and social consequences for downstream communities.

In particular, there would be very significant environmental impacts on the health of ecosystems in the Lower Darling River. Current levels of extraction have already led to serious negative environmental impacts on Murray-Darling Basin fish populations, as well as on human communities and the function of ecosystems of the Lower Darling River. Additional take through floodplain harvesting in upper catchments will only exacerbate these very serious impacts.

Management of water resources going forward should be amended to reduce volumes and conditions of take in the Upper Barwon-Darling system to levels that will be sustainable into the future and compatible with survival of interconnected rivers across the Northern Basin.

In the land of 'droughts and flooding rains', river operations and diversions have effectively removed the 'flooding' half of the equation, leaving the dry part of the cycle dominant for river ecosystems. Management of the Barwon-Darling catchment needs to include adequate minimum flows to the end of the system, to ensure that the whole system can build resilience and survive future drought conditions. Without provision of minimum flows, the impacts of extractions within any sub-catchment are transferred to downstream communities and threaten livelihoods and river health in other communities.

The proposed changes to regulations to legalise floodplain harvesting do not take into account the impacts on inflows to the river systems. The interception of water before it reaches river channels should be counted as an extraction having equal impact compared to diversions out of river channels, and these extractions should be measured and included in total water accounting for the Barwon-Darling system.

The proposal to allow 500% carryover is totally inappropriate in a catchment with such high variability in inflows, and the proposed system would leave the rivers forever in debt to licence holders while short-changing all downstream human and ecological communities. It is recommended that water accounting should be annual with no carryover, strictly based on current water availability and flow conditions. No trading of licences should be allowed, owing to the highly variable flows and location-specific hydrology of where water can be intercepted. There should be no provision for compensation in such a highly variable system where there is no practical ability to control water availability.

Existing environmental flows need to be protected from floodplain harvesting and irrigation take during their passage through sub-catchments, so that the full allocation can reach the target site which may be further downstream. These flows have been purchased with taxpayer funds to improve ecosystem health, so they should be delivered in full for that purpose. Interception by irrigators represents a financial windfall to individuals with very significant costs for the environment and for downstream communities.

River communities rely on flowing rivers to support their livelihoods and well-being. This is particularly important for Traditional Owners living along Barwon-Darling rivers. Pastoralists in downstream reaches are struggling to water and feed stock during low flows. All of these communities are suffering financial, social and mental hardship from reduced water availability. Fairer water-sharing arrangements and social support programs are needed to sustain these communities into the future, along with minimum river flows. Accounting for floodplain harvesting needs to be included in total water management for each sub-catchment.

Low flows along more than 1000 km of the Darling River over past decades have undermined local business, tourism and local agriculture. Revised water-sharing regulations which provide for the maintenance of minimum low flows and fairer water-sharing arrangements would sustain all communities along the length of the Barwon-Darling system. These communities cannot sustain further extraction of water from upstream reaches through unsustainable levels of take via floodplain harvesting.

Reduced flows in the Upper Darling system were a significant contributing factor to recent major fish kills. The water being targeted for extraction through the floodplain harvesting mechanism is an essential input to sustain rivers during floods.

Throughout the Murray-Darling Basin, rainfall and soil moisture reserves are declining, while flood frequencies and durations are also declining. This means that Basin ecosystems are losing resilience and are less able to withstand drought. These effects will be exacerbated by climate change, which will reduce inflows significantly. It is essential that all sub-catchments include minimum flow provisions and end-of-system flows to transmit to the next sub-catchment downstream.

The Barwon-Darling sub-catchment is an essential contributor to the well-being of the whole Murray-Darling Basin, with particular emphasis on its critical importance to large native fish species throughout the Basin. The regulations to legalise floodplain harvesting must be set within sustainable limits, not increase levels of extraction.

[Background to comments in submission](#)

I have worked on sustainable management of natural resources in the Murray-Darling Basin throughout my career, which has covered water policy and governance in the SA environment agencies, practical wetland rehabilitation projects in a conservation NGO, academic research on environmental water needs for floodplain vegetation and wetlands, and environmental consulting on natural resources management.

My viewpoint is that of a wetland ecologist with long experience in both policy and on-ground management of the wetlands and rivers of the Murray-Darling Basin. One of my current roles is as part-time wetland ecologist advising on environmental watering projects in the SA Murray Valley being managed by Nature Foundation.

I became more closely involved in the Basin Plan implementation process from 2016 as a Healthy Rivers Ambassador and then a River Fellow in 2017. Our volunteer group includes representatives of communities throughout the Basin. From our meetings and briefings, I have become very concerned that the implementation of the Murray-Darling Basin Plan and its supporting elements, including Water Sharing Plans, are not on track to deliver ecologically sustainable outcomes for Basin ecosystems or to deliver the Basin Plan goal of healthy working

rivers. I want to see an effective Basin Plan with all its complementary elements delivered as intended, to provide a sound framework for water sharing and sustainable management of river ecosystems so that all Basin communities can survive and thrive into the future.

Thank you for the opportunity to provide a submission Barwon-Darling Floodplain Harvesting (FPH) Rules. Please advise if any clarification is required or further details are required on sources of information for this statement.

Yours sincerely,

[Redacted signature]

[Redacted name]

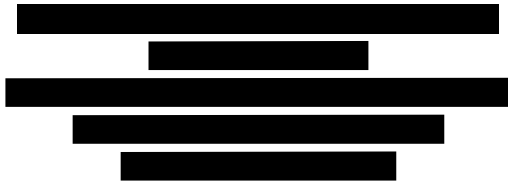
[Redacted title]

[Redacted address line 1]

[Redacted address line 2]

[Redacted address line 3]

[Redacted address line 4]



Healthy Floodplain Project
Department of Planning and Environment – Water
Locked Bag 5022
Parramatta NSW 2124
floodplain.harvesting@dpi.nsw.gov.au

Friday 8 July 2022

SUBMISSION
Barwon-Darling Floodplain Harvesting Rules

Introduction

The [redacted] 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.

[redacted] welcomes the opportunity to engage in the development of rules to manage Floodplain Harvesting (FPH) in the Barwon-Darling River system. We note that the Barwon-Darling has suffered significant ecological impacts from poor water management in the Northern Basin over many decades. This includes the world’s longest blue-green algal bloom in the early 1990s and the historic fish kills in the 2019 drought. The NSW Natural Resources Commission identified that the Barwon-Darling is suffering ecological collapse indicating an urgent need to improve water management and extraction behaviour both within the river system and within connecting upstream tributaries. The Barwon-Darling is listed as an aquatic endangered ecological community under the NSW *Fisheries Management Act 1994*.

The regulation of FPH in the Barwon-Darling is an opportunity to rectify some of the ecological damage and to improve drought resilience by protecting a range of flows, especially overbank flows and rainfall runoff. Entitlements should not be above the original estimate of 16.5 GL in the 2012 Barwon-Darling Water Sharing Plan and should be lower to mitigate past and ongoing environmental and cultural damage.

[redacted] does not support many elements of the NSW Government FPH Policy or its implementation. The policy prioritises individual property access to flood flows and rainfall runoff. This has been given higher consideration and investment over and above the assessment

of environmental, cultural, and social harm caused by 40 plus years of unregulated access to important flood flows. The Sustainable Diversion Limit (SDL) for the Barwon-Darling has been breached every year since the SDL came into effect in 2019, under recent audits by the Murray-Darling Basin Authority.

It is critical that water licences for cultural use and Native Title are granted in the Barwon-Darling prior to new private property rights being granted to the irrigation industry.

Key Issues with FPH regulation in Barwon-Darling

1. Uncertainty around proposed volume of entitlement
2. Initial water determination and subsequent annual water determinations should be a maximum of 1ML per unit share with flexibility to decrease the volume of share depending on antecedent conditions
3. █████ strongly rejects a rule enabling 500% carry over. No carryover and annual accounting are critical for FPH management
4. Larger entitlements must not be granted for annual accounting rules
5. No exemption for rainfall runoff – all water capture must be accounted for
6. No trading of FPH entitlements
7. No licencing of works in designated floodplain Zones A and D
8. No licencing of works until all unapproved and ‘hotspot’ works have been removed or remediated. Lagoons and natural drought refugia must not be licenced as FPH works
9. Adequate rules to protect held environmental water
10. Tributary end-of-system flows must be protected under resumption of flow access rules
11. No access to FPH until Menindee Lakes holds 450 GL and upstream forecasts are for 15 consecutive days of 30 GL/day at Wilcannia.
12. █████ supports amendment provisions to strengthen all FPH rules
13. The issuing of FPH licences in the Barwon-Darling should not precede the fulfilment of unmet Cultural Water requirements

Implementation of NSW FPH Policy

Documents provided for the community consultation process on regulating FPH in the Barwon-Darling provide conflicting information on the implementation of the NSW FPH Policy.

The Model Scenarios report states that the determination of individual entitlements will not be based on history of use.¹ Yet the Community Assistance report states that annual accounting entitlements would have to be three times larger than 5-year accounting entitlements ‘*in order to achieve the same level of historical diversions.*’² █████ strongly opposes the position to maintain an historic level of diversion. There is no justification for larger annual entitlements.

The Community Assistance report outlines four primary considerations used when developing account management rules:

- 1. managing growth above the extraction limit that has already occurred*
- 2. managing growth above the extraction limit that may occur in the future*

¹ DPE -Water May 2022. Floodplain harvesting entitlements for the Barwon-Darling unregulated river system. Model scenarios p 12

² DPE-Water May 2022. Barwon-Darling: Floodplain harvesting in water sharing plans. Report to assist community consultation p 13

3. *risk the environment and downstream communities*

4. *flexibility for the licence holder.*³

■■■ considers that the key priority for the NSW Government has been to focus on flexibility for licence holders at the expense of risk to the environment and downstream communities. The modelling associated with Plan Limit, growth in use, SDLs and Base Diversion Limits (BDL) in the Barwon-Darling is not transparent and has a history of questionable fudge factors. This is evident with the recent response to the breaches of the SDL in 2020 and 2021 water years.

There has been no concerted effort to assess risk to the environment and downstream communities or remediation of damage caused by 40 plus years of unregulated FPH.

■■■ strongly objects to the prioritisation given to locking in historical diversions through the accounting process. This position demonstrates the NSW Government's favouritism towards the irrigation industry at the expense of the rest of society and the environment. Given the uncertainties within and variations between data on historical diversions and model outcomes, it appears that this process could lock in some growth beyond actual historical diversions.

This prioritisation, and the Government's approach to developing specific rules to regulate floodplain harvesting, also demonstrate a lack of intention to fully comply with sections 5(3) and 9 (1) of the Water Management Act 2000.

Modelling

■■■ does not support the approach taken to building the model for assessing FPH in the Barwon-Darling. There is a lack of consistency in that observed flow measurements are used from the Border Rivers and modelled flows are used from the other tributaries ie Gwydir, Namoi and Macquarie to assess entitlements. At the same time, it is proposed to use all modelled flows to assess growth in use. We also note that a new Source model is being developed for the Namoi to finalise FPH entitlements in that valley. This may have an impact on modelled Barwon-Darling inflow data.

The model has a number of high-level uncertainties including accuracy of river diversions, sparsity of records on harvested volumes, rainfall runoff where it is the dominant form of take and medium-level uncertainties including availability and error in flow data, on-farm storage capacity, crop model parameters, rainfall runoff parameters generally.

The lack of actual harvested volumes data as either rainfall runoff or from overbank flow has reduced the ability to minimise uncertainty in the model and thus the ability to verify the accuracy of the modelling.

The other significant limitation of the Barwon-Darling model is the estimation of the proportion of overbank flows that return to the river. This will require additional data collection and method development, and additional detail in the model.

There are four model scenarios presented that provide different volumes of FPH:

- Plan Limit (CAP) Scenario

³ Ibid

- Current Conditions Scenario
- Eligible Development Scenario
- Plan Limit Compliance Scenario

It is unclear from any of the documents which scenario is used to determine the volume of FPH entitlement and what that proposed volume is.

█ strongly advises a precautionary approach to licencing FPH in the Barwon-Darling and maintains that the original estimate of 16.5 GL as used in the 2012 Water Sharing Plan should be the maximum limit of licenced entitlements so that diversions meet the SDL.

Proposed volume of FPH entitlement

It is very unclear from the information provided what volume of licenced entitlement is proposed for FPH extraction in the Barwon-Darling.

The Community Assistance report identifies that *'In the Barwon-Darling Unregulated River Water Source, the total share components for floodplain harvesting (unregulated river) access licences are estimated to be 51,320 unit shares.'*⁴

The Plan Limit Scenario identifies harvesting of 9.6 GL overbank flow, 6.8 GL exempt rainfall runoff and 1.3 GL non-exempt rainfall runoff. This is a total of 19.5 GL.

The Current Conditions Scenario identifies harvesting of 18.6 GL overbank flow, 3.8 GL exempt rainfall runoff and 2.4 GL non-exempt rainfall runoff. This is a total of 24.8 GL.

The Eligible Development Scenario is not provided.

The Plan Limit Compliance Scenario identifies harvesting of 17.7 GL overbank flow, 4.1 GL exempt rain-fall runoff and 2.1 GL non-exempt rainfall runoff. This is a total of 23.9 GL

There is no clear statement about which model scenario will be used to determine licence entitlements. There are serious large discrepancies in the information provided.

█ strongly opposes the FPH Policy to exempt some volumes of rainfall runoff from the licensing regulation. This equates to free, unaccounted water take and is a gift to the irrigation industry at the cost of environmental, cultural, and social needs. This policy exemption is particularly concerning with the high level of uncertainty surrounding data on rainfall runoff in the model.

█ maintains that the licensed entitlement, including all rainfall runoff capture, should not be more than the initial estimate of FPH extraction in the 2012 Barwon-Darling Water Sharing Plan (16.5 GL).

⁴ Ibid p 11

Proposed Accounting Rules

1. 5-year accounting

█ strongly objects to the proposed 500% carry-over rule. The ability to divert this volume of entitlement from the one flood event is likely to cause significant impacts on the environment, cultural values and downstream communities. This includes loss of important groundwater recharge, loss of inundation of floodplain wetlands such as billabongs and other drought refugia, impact on floodplain specialist native fish breeding opportunities and loss of floodplain grazing opportunities.

The fact that there is no current information available on return flows points to the need for caution and conservative accounting rules.

2. 1-year accounting

█ strongly supports that no carryover is provided to FPH entitlements. We contest the argument that 1-year accounting will result in larger entitlements; this is purely a construct of the current implementation focus. The argument that trade of these could cause a growth in use reinforces our argument in the next submission point. Any growth in use will be caused by the Government's failure to properly manage and constrain use. Stronger constraints are needed regardless of accounting period. There is no justification for 1-year accounting to provide a much higher volume of entitlement.

Applying historical levels of diversions based on poor and uncertain models is a key failure in the implementation of FPH policy.

3. Trade

█ strongly opposes any trade of FPH licences. The possibility that this could cause a growth in use by trading to areas with a higher frequency flow rate or with more reliable access to water on the floodplain is a strong argument against any trade. This has already happened in some reaches with other forms of licence. When trading of other access licences was permitted all of the licences that used to be in and near Walgett weir pool were moved to near Mungindi resulting in less flow in all of the intervening reach of the Barwon, at the expense of the ecosystems in that reach. Upstream movement of other licences, or movement into any other locations with greater ease of access to local or overbank flows should not be possible. Schedule 3 of the *Basin Plan 2012* establishes the Basin water market and trading objectives and principles. Free trade of surface water is required with several exceptions. These include when the environment may be harmed. █ considers that trade of FPH licences will harm the environment and should not be permitted under new regulation.

4. Available Water Determinations

█ supports that an initial available water determination for floodplain harvesting (unregulated river) access licences in the Barwon-Darling Unregulated River Water Source of 1 ML per unit share or less depending on the final volume of entitlement across the Valley and on antecedent conditions and whether the any extraction limits are still being exceeded.

█ supports that the available water determination rules for floodplain harvesting (unregulated river) access licences in the Barwon-Darling Unregulated River Water Source is 1 ML per unit share every year after the first year or a lesser amount to ensure compliance with the extraction limit.

Licencing Floodplain Works

█ does not support the licencing of works in Floodplain Management Plan designated Zones A and D for FPH. There should also be no licencing of lagoons or other natural floodplain water bodies as FPH works. Extraction from these important wetland habitats threatens their ability to provide critical drought refugia in a drying climate.

All unapproved works and ‘hotspot’ works must be removed or remediated before FPH works licences are granted. No access entitlements should be allocated in relation to unapproved works.

Rules to Protect Held Environmental Water

Held Environmental Water (HEW) crossing the Queensland Border or entering the Barwon-Darling from the NSW Northern Basin tributaries must be protected from FPH extraction if the volumes contribute to overbank flows. These provide important environmental function.

The current Active Management rules in the Barwon-Darling Water Sharing Plan do not protect any of these sources of HEW. This is a key failing of water management under the Basin Plan that must be rectified. The opportunity for piggybacking must be protected.

Resumption of Flow Rules

█ strongly opposes the low local in-valley flow targets for access to FPH adopted to manage the protection of ‘first flush flows’⁵ in the NSW Northern Basin tributaries. There was no consultation around these rules, and they basically lock in existing water management practice.

These rules will keep the Barwon-Darling in prolonged dry scenario and drought conditions. The end-of-system flow targets must be lifted and flows protected in the Barwon-Darling Water Sharing Plan.

Access to overland flows in the Barwon-Darling should not occur until Menindee Lakes holds 450 GL and a flow of 30 GL for 15 consecutive days has occurred or is forecast at Wilcannia.

The current proposed levels do not account for the 125 GL of dead storage in Menindee Lakes and will maintain the Darling/Baaka in a state of ecological collapse.

Amendment provisions for FPH rules

█ strongly opposes the proposal that an amendment provision to add, modify or remove provisions for FPH (unregulated river) access licence doesn’t significantly alter the long-term volume of FPH that can be taken under legal limits.

⁵ <https://www.industry.nsw.gov.au/water/plans-programs/healthy-floodplains-project/about/nsw-legislative-council-inquiry-into-floodplain-harvesting>

The lack of assessment of risk of FPH to the environment, cultural values and downstream communities should be recognised and allow for appropriate amendments provisions to rectify these impacts.

The lack of information about return flows that has been left until after FPH licences are granted requires strong amendment provisions that do not trigger compensation under the *NSW Water Management Act 2000*.

We agree that strong amendment provisions across all rules should be available:

- to allow flexibility should environmental flows be targeted to create overbank flow, or
- in response to monitoring, evaluation and reporting outcomes of environmental benefits from licensing floodplain harvesting, or
- in response to improved understanding of the influence of floodplain harvesting on downstream flows
- in response to improved integration of hydrologic and hydrodynamic model systems.

Conclusion

█ urges the NSW Government to take a more precautionary approach to the regulation of FPH in the Barwon-Darling. The system needs more support to achieve improved resilience and ability to survive future climate change predictions of more intense and prolonged drought.

This means that much less overland flow should be intercepted for private commercial gain at the expense of all other users of the river system, including native plant and animal species.

█
█

Yours sincerely

█
█

Submission - Barwon-Darling Floodplain Harvesting Rules

The proposed management of FPH in the Barwon-Darling must not lock in individual property history of use. The Barwon-Darling River was identified by The Natural Resources Commission identified the Barwon-Darling River as suffering ecological collapse during recent intense drought conditions. The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL to FPH extraction.

No FPH works licenses should be granted until all unapproved and floodplain 'hotspot' works are removed or modified.

No works in Floodplain Management Plan Zone A and D should be licensed to take FPH.

No lagoons or natural drought refugia should be licensed to take FPH.

The volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares), as identified in the Community Assistance Report. This differs greatly from the figures used in the modelled scenarios. I have no confidence in the information provided for FPH assessment or proposed entitlement in the Barwon-Darling River.

I do not support 500% carryover – will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply.

I support annual accounting with no carryover – there is no rationale for this causing larger entitlements other than faulty policy favoring history of use.

I do not support any trading of FPH entitlement – it is likely to cause environmental and cultural damage – this fails to meet the requirements of trading rules

No FPH works licenses should be granted until all unapproved and floodplain 'hotspot' works are removed or modified.

No works in Floodplain Management Plan Zone A and D should be licensed to take FPH.

No lagoons or natural drought refugia should be licensed to take FPH.

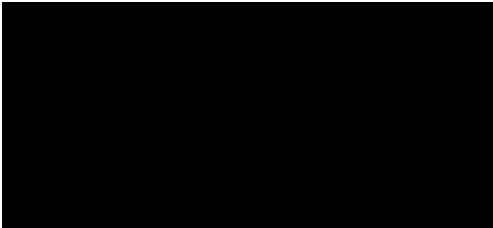
I support no access under resumption of flow rules – these must be stronger rules to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi, Macquarie

I support strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation.

Regards,

████████████████████

8th July 2022



Healthy Floodplain Project
Department of Planning and Environment – Water

Locked Bag 5022
Parramatta NSW 2124

floodplain.harvesting@dpi.nsw.gov.au

Dear Healthy Floodplain Project

DRAFT RULES FOR FLOODPLAIN HARVESTING IN THE BARWON DARLING

The [REDACTED] appreciates the opportunity to comment on the draft rules for floodplain harvesting in the Barwon Darling.

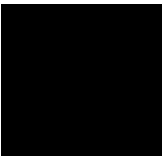
[REDACTED] mission is to protect nature through community action. Our strengths include State-wide reach, deep local knowledge, evidence-based input to policy and planning processes, and over 65 years' commitment to advancing the NSW protected area network and its professional management. We also provide outstanding opportunities for experiencing and learning about nature through our unrivalled program of bushwalking, field surveys, bush regeneration and other outdoor activities.

General Comments

Over the past 200 years, many rivers, wetlands and floodplains in New South Wales have had their natural flow regimes disrupted because of dams, weirs, floodplain development, and water regulation and extraction. Indeed, the Barwon-Darling has suffered significant ecological impacts from poor water management over many decades. This includes the world's longest blue-green algal bloom in the early 1990s and the historic fish kills in the 2019 drought. These events show the Barwon-Darling is an ecosystem in crisis. Floodplain harvesting currently is a form of 'unspecified take', yet there is profound evidence that environmental damage from it is occurring and significant. We need to 'draw a line in the sand'. **Therefore, the [REDACTED] suggests no further issuing of floodplain harvesting licences should occur until the cumulative environmental and cultural impacts of floodplain harvesting has been assessed.**

Additionally, the NSW Government has been building a world-class network of national parks and reserves to protect and showcase the State's most important natural assets. A key part of this focus includes several large scale protected areas in western regions of the State. Given the significant investment, the [REDACTED] recommends that steps should be taken to ensure these ecosystems are conserved in a healthy and resilient state, and that the integrity of the region's aquatic and semi-aquatic wildlife is conserved. **To do this, a better understanding the hydro-ecological function of the area is fundamental and must be realized before any additional harvesting licences are permitted.**

[REDACTED]



The proposed rules overlook the influence that persistent hydrodynamic features, such as flowing water, has in shaping ecological processes and patterns, particularly during low flow periods. Many of these protected areas lie off the main channel or within a sub catchment. **Therefore, tributary end-of-system flows under resumption of flow rules must be specified and protected**

Specific issues

Aligned with the three key issues the [REDACTED] has stated above, there are several specific changes that we believe should be made:

1. The impact on First Nation communities from the current approach to water management is clearly apparent and negative. Cultural flows and maintaining cultural sites need to be resolved before additional floodplain structures are licenced
2. Studies show it is the natural hydrological and hydrodynamic features that have shaped the ecology of aquatic biota in the Barwon–Darling River but these features are now experiencing unprecedented change and disruption. The floodplain influences the health of the river. We know floodplain storage and diversion have increased the frequency and duration of zero flows in some reaches, but arguably the most substantial impacts along the entire river, has been on: (i) low flows, which are now frequently below lotic thresholds, and (ii) the magnitude of near-annual flow pulses, which are reduced by over 90%. In other words, the cumulative effect of floodplain harvesting means the river is predominately lentic (still water) which is a threat to the lotic fauna which would naturally occur in the area. The [REDACTED] therefore opposes:
 - a. a rule enabling 500% carry over. No carryover and annual accounting are critical for FPH management
 - b. Any exemption for rainfall runoff – all water capture must be accounted for
 - c. Any trading of FPH entitlements as it risks the concentration of works within sub catchments
 - d. As the integrity of natural hydrological and hydrodynamic features has been disturbed, there should be no new licencing of works until all unapproved and ‘hotspot’ works have been removed or remediated.
 - e. Lagoons and natural drought refugia must not be licenced as FPH works
3. Consistent with the specific context mentioned immediately above, regarding that the system is naturally a lotic rather than a lentic environment, there is a need to establish sound end of system flow targets to ensure that such flows are maintained. Water volumes and discharge are the universal currency of flow management, as well as critical for spatio-temporal hydraulics (hydrodynamics, including: depth, velocity, and turbulence (that is, they are fundamental to the physical environment in which aquatic biota exist).

We know flow data from historical droughts indicate that, without storage and diversion of floodplain flow, a flow pulse greater than 9,000 ML/d would have occurred every 15 months for that river. These reliable flow pulses are analogous to the annual spring flow pulses that characterised the unregulated flow regime of rivers nearby. To maintain such targets with a floodplain licencing environment the [REDACTED] suggests including:

- a. Setting a foundation by ensuring adequate rules to protect held environmental water
- b. No access to FPH until Menindee Lakes holds 450 GL and upstream forecasts are for 15 consecutive days of 30 GL/day at Wilcannia.

Conclusions

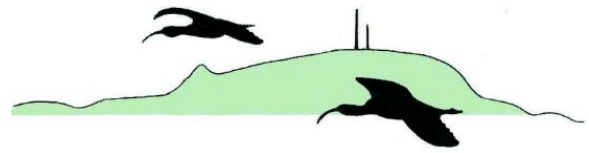
A common assumption for the Barwon–Darling is river flow is variable with long periods of zero flow. Yet, it is clear from several studies that near annual, landscape-scale flow pulses are critical to ecosystem health. Given significant government resources have been allocated to conserve key ecosystems in the

region, there is a significant opportunity to improve ecosystem integrity by recovering these key ecohydraulic facets of the natural flow regime WITH better floodplain harvesting management. Such context, would allow a more appropriate and sustainable suite of floodplain harvesting rules to be developed beyond what is currently proposed.

[REDACTED]

Yours sincerely

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



**ORANGE FIELD NATURALIST AND
CONSERVATION SOCIETY Inc**

PO Box 369

ORANGE NSW 2800

orangefieldnats@gmail.com

8th July 2022

Healthy Floodplains Project

By email: floodplain.harvesting@dpi.nsw.gov.au

RE: Barwon-Darling Floodplain Harvesting (FPH) Rules

Orange Field Naturalist and Conservation Society (OFNCS) is grateful for the opportunity to comment on the Barwon-Darling Floodplain Harvesting (FPH) Rules.

The Society opposes a number of the proposed FPH rules especially new entitlements, the carryover levels proposed, trading of FPH entitlements and the low FPH access target of water flow into Menindee Lakes. Having rules around access to and resumption of replenishment flows is positive however the trigger levels when this occurs must be much higher.

Orange is on the headwaters of the Macquarie River and any water that falls here should be managed well for the environment and potentially flow down the full length of the river system. OFNCS and its members have been advocates for the environment since its inception in 1974 and have broad experience in understanding and caring for the environment.

The problems of water management in the Barwon-Darling were highlighted several years ago when the river stopped flowing in the lower parts of the system. The very low water levels led to fish kills, blue green algae, and town water security problems. The Darling River is an Aquatic Endangered Ecological Community under the Fisheries Act and the FPH rules must be strengthened to ensure the protection of this endangered community.

Any FPH rules must protect the inflows of environmental water from northern NSW tributaries and Queensland. Also, wetlands, lagoons, and natural drought refugia in the catchment should not be used as storage of licenced water. This would create 'un-natural' water flows and conditions and permanently change the environment and biodiversity of these areas.

There are contradictions in the rules where licences are proposed for granting now yet the Community Assistance Report states several studies need to be done that won't be completed for 3-5 years. How can the appropriate level of licencing be done before these reports are completed? The first relates to return flows and states '*Further data collection and model enhancements are needed to explicitly represent return flows in river system models and further improve the management of floodplain harvesting in the Northern Basin. Without modelling return flows, the department is unable to properly test*

the efficacy of event-based restrictions for floodplain harvesting. We have made a commitment under the Floodplain Harvesting Action Plan to invest in improving the representation of return flows work from July 2021. This work has commenced but will take 3-5 years to complete. The second relates to the interaction of water sharing plan rules and cultural outcomes. Here *'a report is being developed to outline the identified cultural assets and values in the Barwon-Darling valley floodplain and assesses the predicted benefits to these assets and values after licensing of floodplain harvesting.'* It is also inappropriate to assume there will be no cultural losses as a result of licensing and licences should not be issued before this report is completed. While the modelling was based on data from the past 100 years there appeared to be little reference to the predicted impact of climate change.

The volume figures for licences that are used in the modelling also seem to be very different to what is stated in the Community Assistance Report. It would appear that the volumes for new licences will mean water extractions will be above the limits in the Plan. Runoff from rainfall should not be exempted but be accounted for as it is also part of the water available within the catchment and floodplain.

The carryover and accounting rules, allowing 100% carryover for each year for 5 years, is extremely generous to licence holders. It will impact downstream areas and has very little regard for environmental sustainability, groundwater recharge and water security for communities. Annual accounting with no carryover is a much more sustainable option. Trading of FPH water entitlements is also not supported by the Society as it does not meet the trading rules that have been previously established. Linked to this the Society supports robust amendment provisions for all the FPH rules so that rule changes can occur, once more data is available and modelling done, so that compensation is not involved.

Once again, the communities and ecosystems downstream will be impacted by the FPH access target of 195GL in Menindee Lakes until there is a forecast of at least 4,000 ML at Wilcannia. This will give them no protection in drought and see a recurrence of the disaster that occurred in the recent drought. 450GL at Menindee should be the target set and the forecast upstream flows should be set higher.

Even though a Community Assistance Report and webinars were provided they still did not untangle the complexity of the FPH rules and water issues.

Significant new licences and rules that allow more water to be removed from the floodplain will mean ecosystem functioning will be compromised irreversibly. Put bluntly, without water there is no life, either for the environment, communities, or landholders.

Yours Sincerely



Rosemary Stapleton
Secretary
Orange Field Naturalist & Conservation Society

FW: Rules: Flood Plain Harvesting

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Mon 11/07/2022 6:52 AM

From: Gill Boehringer [REDACTED]

Sent: Friday, 8 July 2022 4:47 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Rules: Flood Plain Harvesting

I write as a former Judge on the Citizen's Inquiry into the Health of the Darling -Barwon River and Menindee Lakes (2019). I am well aware of the fragility of the River and Lakes, not least the widely recognised near ecological collapse during what appears to be frequent drought conditions over recent years. Such conditions will likely be repeated in our climate challenged future.

Flood plain harvesting presents a major problem in attempting to achieve a healthy river system. New Rules to ensure the appropriate amount of water harvested are welcome. The situation in the past has not been positive!

I have a few comments to make on the proposed rules put forward. I have had little time to prepare a comprehensive response, so my lack of comment on all the Rules proposed does not mean that those not contested are approved.

Essentially, I fear that the amount of water to be harvested under the new Rules will continue to allow far too much water extracted.

I oppose the idea of carryover; I oppose the trading of entitlements; No FPH licenses should be granted before the many unapproved works are removed/modified.

Yours sincerely,

Gill H. Boehringer

[REDACTED]
Woy Woy

NSW 2256
[REDACTED]

You can publish my submission



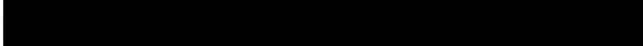
FW: Flood Plain Harvesting Proposal - objection

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Mon 11/07/2022 6:53 AM



-----Original Message-----

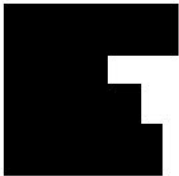
From: 

Sent: Friday, 8 July 2022 4:51 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Flood Plain Harvesting Proposal - objection

I object to the proposed flood plain harvesting plans.



Sent from my iPad

[REDACTED]

FW: OBJECTION TO FLOOD PLAIN HARVESTING

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Mon 11/07/2022 6:54 AM

[REDACTED]

From: [REDACTED]

Sent: Friday, 8 July 2022 4:52 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: OBJECTION TO FLOOD PLAIN HARVESTING

Dear Sir/Madam,

I object to flood plain harvesting.

The Barwon /Darling is part of the most important river system in Australia.

We live on the driest inhabited continent on the globe. We must protect our water.

The Natural Resources Commission has identified the Barwon/Darling as suffering ecological collapse during recent intense droughts. This demonstrates the damage done by FPH. These drought conditions will recur and with more frequency and intensity.

The Basin Plan Sustainable Division Limit has been breached in 2019 and 2020. This should not happen, and must be stopped from happening in the future.

Individual property history of use must not be used when planning proposed management of Flood Plain Harvesting.

The whole river system must be protected .

Provisions must be made so changes in the FPH management rules do not trigger compensation.

Water is Life.

Please save the Barwon/Darling river System.

Your Sincerely,

[REDACTED]

[REDACTED]

Sent from [Mail](#) for Windows

FW: Barwon-Darling Floodplain Harvesting Rules

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Mon 11/07/2022 6:54 AM

From: [REDACTED]

Sent: Friday, 8 July 2022 6:29 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Barwon-Darling Floodplain Harvesting Rules

I object to the new Barwon-Darling Floodplain Harvesting Rules. No FPH works licenses should be granted until all unapproved and floodplain 'hotspot' works are removed or modified. Otherwise, this is just approving already-occurring water theft.

The Barwon-Darling River was identified by the Natural Resources Commission as suffering ecological collapse during recent intense drought conditions. Floods are a phenomenon which should be used to replenish and revive the river system, not stored for commercial gain in the northern sections of the system. Not a single drop of floodwater is wasted. Even during the recent severe flooding in NSW, only recently did the floodwaters reach the Macquarie Marshes which were until then severely parched. Sufficient good water has still not reached the Menindee Lakes & the Darling around Pooncarie.

The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL to FPH extraction. This volume was used in the development of the Murray-Darling Basin Even applying this volume was not sufficient for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply. The proposed 500% carryover will cause loss of key flood flows.

No works in Floodplain Management Plan Zone A and D should be licensed to take FPH.

No lagoons or natural drought refugia should be licensed to take FPH.

Yours sincerely,

[REDACTED]

FW: Submission ::Barwon-Darling Floodplain Harvesting (FPH) Rules

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Mon 11/07/2022 6:55 AM

From: [REDACTED]

Sent: Friday, 8 July 2022 7:23 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Submission ::Barwon-Darling Floodplain Harvesting (FPH) Rules

Background

The Barwon-Darling River was identified by the Natural Resources Commission as suffering ecological collapse during recent intense drought conditions.

The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL (gigalitre = 1 billion litres) to FPH extraction.

This volume was used in the development of the Murray-Darling Basin Plan.

The proposed new entitlements are above this volume.

Extraction from the Barwon-Darling has breached the Basin Plan Sustainable Diversion Limit in 2019 and 2020.

The proposed management of FPH in the Barwon-Darling must not lock in individual property history of use.

My concerns

VOLUME:

The volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares), as identified in the Community Assistance Report. This differs greatly from the figures used in the modelled scenarios. There is no confidence in the information provided for FPH assessment or proposed entitlement in the Barwon-Darling River.

I see no evidence that the FPH licences will keep extraction below the Plan Limit and I don't support this.

Neither do I support the rainfall runoff exemption – this is free water that must be accounted for

ACCOUNTING RULES:

I do not support 500% carryover – will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply.

However, I do support annual accounting with no carryover – there is no rationale for this causing larger entitlements other than faulty policy favouring history of use.

I support that initial allocation is 1 ML unit share or less depending on antecedent conditions and that annual allocation is 1 ML unit share or less, as above

TRADING:

I absolutely do not support any trading of FPH entitlement – it is likely to cause environmental and cultural damage – this fails to meet the requirements of trading rules. The whole concept of trading water has been a disaster elsewhere in the Basin and it is prone to very perverse outcomes

FLOODPLAIN WORKS

There should be No works in Floodplain Management Plan Zone A and D

No lagoons or natural drought refugia should be licensed to take FPH

FPH works licenses should NOT be granted until all unapproved and floodplain 'hotspot' works are removed or modified.

ACCESS RULES

There should be no access to water under resumption of flow rules – these must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi, Macquarie

I am concerned about the FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia. This offers no drought protection and will cause ecological damage. A target of 450 GL in Menindee is needed with higher forecast upstream flows.



PROTECTION OF ENVIRONMENTAL WATER:

Rules must protect held environmental water inflows from Queensland and NSW northern tributaries.

AMENDMENTS:

I support strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation.

Your sincerely

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]



8 July 2022



**NSW Department of Planning and Environment Cluster
Water for NSW**

Re: Barwon Darling Valley Floodplain Management

via email to: floodplain.harvesting@dpi.nsw.gov.au

The NSW National Parks Association's Landscape Conservation Forum (NPA LCF) welcomes an opportunity to review and comment on the proposed rules for floodplain harvesting (FPH) on the Barwon-Darling. The LCF provides the following comments:

1. The National Parks Association of NSW is a non-government conservation group that seeks to protect, connect, and restore the integrity and diversity of natural systems in NSW and beyond, through national parks, marine sanctuaries, and other means,
 -
2. In relation to FPH the position of NPA is that water dependent ecosystem along catchments should be given watering priority to ensure their long-term health and integrity. NPA will argue against any measures which have a negative impact on the ecological integrity of our shared natural heritage,
 -
3. NPA LCF strongly believes that floodplain harvesting needs to be tightly regulated but not in the way currently proposed as the NPA LCF believes that the needs of the environment are not being given priority as required by the Water Management Act 2000,
 -
4. Floodwaters are needed to reach and maintain all of the ecological assets that are mapped in the [Floodplain Management Plan for the Barwon-Darling Valley 2017](#). Inability of any particular flow event from one or several sources to reach the higher or more distant assets is not a reason to ignore ecological needs in favour of irrigators: the lower-level assets need more frequent or prolonged inundation, as indicated in the Barwon-Darling Long Term Water Plan for each reach of the river,
 -
5. **VOLUME:**
 - The volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares), as identified in the Community Assistance Report. This differs greatly from the figures used in the modelled scenarios. There is no confidence in the information provided for FPH assessment or proposed entitlements in the Barwon-Darling River,
 - NPA LCF does not accept the claim that new FPH licenses will keep extraction below the Plan Limit,
 - NPA LCF does not support the rainfall runoff exemption – this water that must be accounted for and should not all be free (other landholders can only trap 10% of their property's runoff),
 -
6. **ACCOUNTING RULES:**



- NPA LCF does not support 500% carryover (account limit of 5ML/unit share with 5-year accounting). This will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, and may result in water supplies for basic rights and a few small towns running low sooner or more often,
- NPA LCF does however support annual accounting with no carryover,
- The initial allocation should be less than 1 ML /unit share because diversions have exceeded the Sustainable Diversion Limit since 2019 and wetlands, fish and birds need more flood flows to recover after a succession of droughts,
- NPA LCF supports that annual allocation be 1 ML per unit share or less, depending on antecedent conditions,

7. TRADING:

- NPA LCF does not support any trading of FPH entitlement – it is likely to cause environmental and cultural damage – this fails to meet the nationally agreed requirements of trading rules,

8. FLOODPLAIN WORKS

- No works in Floodplain Management Plan Zone A or D should be licensed to take floodwater,
- No lagoons or natural drought refugia should be licensed as FPH locations,
- No FPH works licenses should be granted until all unapproved and floodplain ‘hotspot’ works are removed or modified,

9. ACCESS RULES

- NPA LCF requests that proposed access rules be changed to give priority to ensuring that all the environmental water requirements in the Barwon-Darling Long Term Water Plan are met. This plan identifies water requirements for flows at various levels in each reach of the river together with duration, frequency, maximum inter-event periods and other requirements to concurrently meet the suit of environmental objectives. Meeting these requirements should be the basis for rules to regulated access, instead of the current apparent goal of locking in the excessively high recent level of FPH diversions,
- NPA LCF supports the concept of no access to the first big flows after the Barwon-Darling has been in drought or when there is a drought in its catchment. Stronger rules are needed to delay and limit resumption of floodplain harvesting both to and along the Barwon-Darling and from storms in its catchment so that a short drought in the river is not artificially extended. This will enable full ecosystem recovery through flooding all the way down the Darling, and in the Murray if needed, before harvesting can commence,
- NPA LCF strongly objects to any FPH access being permitted when Menindee lakes volume is below 195 gegalitres. The proposed rules offer no drought protection and will cause ecological damage. When Menindee lakes have dropped this low, no harvesting should be permitted until 450 GL is in storage. Limiting harvesting to ensure that 4000 ML reaches Wilcannia from every event from which harvesting is permitted could be an appropriate rule after the 450 GL target is reached until the lakes drop below target again, unless it is too long since environmental water requirements for higher flows have been achieved,
- NPA LCF believes that the proposed flow rates into the Barwon required to allow harvesting from the Border Rivers, Gwydir, Namoi or Macquarie when there are storm flows during or after a drought should be raised much higher and relate to human and ecological needs in the Darling, not just event volume at the end of these upstream systems. The proposal to allow harvesting in the Namoi catchment when Menindee Lakes are below 195 GL shows appalling disrespect for the

people and environment downstream,

•

10. PROTECTION OF ENVIRONMENTAL WATER:

- Rules must protect held environmental water inflows from Queensland and NSW northern tributaries. Public funds have been spent on water for the environment so when the environmental water holder says they are “taking” the environments purchased share of a flow event it should be protected all the way to the Murray, so that none of it can be harvested or pumped out for irrigation along the Barwon-Darling. Failure to actively protect this water by raising the limits applying along the Barwon-Darling will be a gift to these irrigators whenever they have not exceeded their long term allocation,

•

11. AMENDMENTS:

- NPA LCF supports strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation,

•

12. NPA LCF requests that this submission and details be published.



Ross McDonnell

**Convenor, Landscape Conservation Forum
National Parks Association of NSW**

Suite 1.07/55 Miller St, Pyrmont NSW 2009

ross@mcdnll.com

protecting nature through community action



FW: Barwon-Darling Floodplain Harvesting Rules

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Mon 11/07/2022 6:56 AM



From: [Redacted]

Sent: Friday, 8 July 2022 10:36 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Barwon-Darling Floodplain Harvesting Rules

SUBMISSION

on proposed Barwon-Darling Floodplain Harvesting Rules, to Department of Primary Industry, NSW.

Thank you for the opportunity to make a personal submission on the proposed changes to these rules.

During the recent very prolonged drought the Barwon-Darling River was a frightening sight in photographs. It appeared to have dried up completely, which of course meant no agriculture, but also lack of water for small towns, for local businesses, household purposes and eventually for drinking: potable water had to be trucked in.

The natural pattern of water retention in the soil in northern NSW seems to be: in drought, rivers are chains of shallow ponds with water slowly trickling between ; in rainy years, water spreads out over the plain and gradually soaks in to the soil, recharging groundwater, allowing plants to reseed and birds and animals to breed, until the next dry period starts again. That floodplain water is essential to the whole system. If it is taken for irrigation the result will be ecological collapse. We will have another Colorado River, of which an article in the Smithsonian magazine twelve years ago said:

'The river has become a perfect symbol of what happens when we ask too much of a limited resource: it disappears.'

Extraction from the Barwon-Darling has breached the Basin Plan Sustainable Diversion Limit in 2019 and 2020, and the new rules for floodplain harvesting lock this in, favouring irrigation over the environment.





FW: Barwon-Darling (The draft rules for floodplain harvesting access licences in the Barwon-Darling)

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Mon 11/07/2022 6:57 AM

-----Original Message-----

From:

Sent: Friday, 8 July 2022 10:47 PM

To: Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Subject: Barwon-Darling (The draft rules for floodplain harvesting access licences in the Barwon-Darling)

To whom it may concern:

I OBJECT TO THE PRESENT PERMITTED FLOOD PLAIN HARVESTING PRACTICES (FPH).

During the very recent drought it is clear that in this era of climate chaos the present unsustainable practices cannot be allowed to continue.

We saw river towns totally devoid of potable water.

It is so clear from the dreadful sight of millions of dying Murray River Cod and dried river beds of the Murray Darling river system, that present day practices of water extraction must be changed to a truly sustainable system.

The AUSTRALIAN environment has supported aboriginal settlements to sustain life for 60000yrs and can only continue further when both rivers and floodplains are left to their natural flows, flooding, and groundwater recharge. The natural flow not be hampered by unsustainable extraction of water. There must be a safe future for farming and townships.

Present day farming practices and flood water harvesting are unsustainable.

Downstream water dependency must not be sacrificed for the sake of short term export crops. We must focus on long term sustainable farming practices.

The MurrayDarling Basin extraction allowance must be reduced and definitely not exceeded.

Open market trading entitlements must be banned, while some local water sharing could be sustained.

Water trading by multinationals and huge wealthy farms leads to corruption.

Dam building cannot be allowed on large scale for the purpose of harvesting river floodwaters as it clearly limits water flow down the length of the river to the river mouth and the sea. This starves 'lower farms and townships of their fair share of water use.

Unauthorised dam building must be stopped.



Coal seam gas must not be allowed to go ahead as the industry has shown that farmlands, valuable bushland, rivers and groundwater are depleted and poisoned, putting rich soils at risk.

The NSW GOVERNMENT must listen to the science eg Prof Richard Kingsford and the traditional indigenous people who have been excluded.

Water is Life. Our rivers are life. If rivers' waters continue to be over-extracted we lose not only life-sustaining healthy rivers but healthy sustainable farmlands' moisture replenishment , and as a result valuable agricultural exports. Coal will not be the valuable export we have relied upon for so long.

Climate change seriously affects all farms and townships. That is the reason that licensing of water storage and water use must change.

So, in order to be able to reinvigorate river flows for farmlands and townships this government must ensure that regenerative farming, permaculture practices and strict water saving and avoidance of water over-use practices are written into law.


Yours faithfully,






Submission to comment of proposed Barwon Darling Floodplain Harvesting Rules - July 2022.

Background

Our group has been working together for the protection and enhancement of  and other floodplain ecosystems of the Lower Murray Basin for over twenty five years. We formed in 1996 as a grassroots community organisation and immediately fought for our forests protection from planned logging operations. Later, we engaged intensely in the Victorian Environment Assessment Council study of Red Gum Ecological Vegetation Class, which eventually recommended a new level of protection for floodplain ecosystems in Victoria, which were found to be underrepresented in the reserve system. Soon after the Red Gum Parks were proclaimed, the Murray Darling Basin Plan was enacted and our group engaged with the initial community consultation processes and have continued to advocate for a strong Basin Plan that holds true to its objectives and delivers a healthy river system for our nation. At the heart of our work and from the very beginning has been our shared vision and work with Traditional Owners and First Nations people to protect these deeply treasured, living cultural landscapes.

The region between Swan Hill and Robinvale is the area of the Basin we are particularly familiar with and we consider it to be a region of great environmental significance - a very special part of the River Murray. It is characterised by arid Mallee landscapes encroaching on productive floodplain areas and boasts the Little Murray, the Wakool, and the Murrumbidgee Junctions. As well as smaller tributaries, billabongs, wetlands and lakes. The Junction of the Loddon River is not too far to the east. It must have been an impressive and incredibly vibrant delta prior to European settlement. Through the heart of this region around Boundary Bend, many rare and threatened species occur and others that are significantly at the southern most extent of their range (Wilga, Northern Sandalwood). Unspoilt areas of Mallee also provide habitat for the unique and wonderful Mallee Fowl. It is a relatively unregulated stretch of the river and is narrower and has a more natural feel to the big weir pools at Echuca, Robinvale and Mildura. The smaller river does not lend itself to water sports like ski boating and jet skis, so fishing is the cherished activity on the water. We therefor depend on a healthy river system and good fish populations to a greater extent. Our members have witnessed through the 60's, 70's and up to the early 90's, the river spilling over into our forests and lakes most years. We learnt, respected and enjoyed nature's important cycle.

These floodplain ecosystems of the Lower Murray and Darling are of immeasurable value for their cultural heritage - not only as places that evidence a culture pre colonisation dating back thousands of years but as a living cultural landscape that remains intrinsically important to Traditional Owners and other First Nations people of our region. Archaeological studies in  in the late

1970s counted approximately 120 earthen mounds and the whole [REDACTED] was added to the Register of the National Estate. That register was closed in 2007, but remains as archival evidence of the site's significance.

Fundamental to maintaining the natural and cultural values within these Parks is water. Integral to river and floodplain ecosystems, these very landscapes have evolved around the ancient journey of life giving water from the mountains to the ocean. Nutrient cycling and food chains, breeding and recruitment all depend on water's flow, abundance and patterns of inundation. Following changes to water trading and ownership in the late 80's and 90's, through the Millennium Drought and beyond with the Basin Plan's implementation, we have seen the flooding patterns (albeit modified) that endured through into the early 1990's diminish. With climate change and increased demand for water in irrigated agriculture, the security of water for rivers and floodplain ecosystems and the outcomes it delivers are increasingly tentative.

A successful Basin Plan relies on all states and communities making cultural and legislative changes in water resource management and making equivalent commitments and sacrifices. It will also rely, most basically on clear and transparent accounting of extraction and monitoring/evaluating of the associated ecological benefits. "Comparing apples with apples", if you like.

Our group played a significant part in helping our community redefine how we value these public natural assets, ultimately seeing them awarded a higher conservation significance and protection. And yet, just a few years later, we are witnessing the potential loss of the key ecological process that has kept them in tact to this point. We are committing in good faith to the SDL Adjustment mechanism process, which proposes huge Offset Projects in e water delivery in our regions floodplains. We are doing so under the assumption that other states are complying with their commitments (i.e. the Cap) and not using any dodgy accounting. The complexities of water use and hydrological modelling make it extremely difficult for our community to fully understand what the inundation scenarios will look like under full Basin Plan delivery and the alternative with the SDL Adjustment in place, let alone one where other catchments are potentially taking more than their share.

The Darling River was identified by the Natural Resources Commission as suffering ecological collapse during recent intense drought conditions resulting in mass fish kills unlike anything we have seen before. This disaster occurred despite our national effort to address over extraction and ensure a healthy Murray Darling Basin for Australia. The Barwon Darling Catchment was brought to our attention back in 2017 with the Four Corners episode "Pumped" and has had a hugely detrimental impact on the health of the whole Basin. Since that time there has been increasing distrust within Basin communities of the government's ability to manage our water resources fairly and sustainably.

The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL (gigalitre = 1 billion litres) to FPH extraction. This volume was used in the development of the Murray-Darling Basin Plan. The proposed new entitlements are above this volume, which is unacceptable, particularly given extraction from the Barwon-Darling has breached the Basin Plan Sustainable Diversion Limit in 2019 and 2020.

We know that climate change was not accounted for in this Basin Plan. NSW has breached the Cap on numerous occasions and is potentially the worst state by far in cap compliance. Inflows to the Basin are declining as a result of climate change, diminishing the water resource considerably. Now is not the time to be increasing take.

As a community organisation deeply committed to floodplain and river health, we believe the current proposals pose a great risk to the success of the current Basin Plan and our

rivers' future in general. We would like to take the opportunity to comment specifically on the following points.

Key Points

VOLUME

- The volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares), as identified in the Community Assistance Report. This differs greatly from the figures used in the models and is therefore untested.
- There is no strong evidence provided for FPH assessment or proposed entitlement in the Barwon-Darling River.
- We are not confident that new FPH licenses will keep extraction below the Basin Plan Limit and there for could be unlawful. Certainly they would be immoral given other states and catchments are committing in good faith to limits.
- We do not support the rainfall runoff exemption - this is free water that must be accounted for the same as all other water extracted across the Basin.

ACCOUNTING RULES

- We strongly oppose 500% carryover - will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply.
- We support annual accounting with no carryover - there is no rationale for this causing larger entitlements other than faulty policy favoring history of use.
- Support that initial allocation is 1 ML unit share or less depending on antecedent conditions.

TRADING:

- We strongly oppose any trading of FPH entitlement - it is likely to cause environmental and cultural damage - this fails to meet the requirements of trading rules.

ACCESS RULES

- Support no access under resumption of flow rules - these must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi, Macquarie
- Strongly object to no FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia. This offers no drought protection and will cause ecological damage. A target of 450 GL in Menindee is needed with higher forecast upstream flows.

PROTECTION OF ENVIRONMENTAL WATER

- Rules must protect held environmental water inflows from Queensland and NSW northern tributaries.

AMENDMENTS

- Floodplain Harvesting Entitlements should not be compensable.

Please keep us informed of the outcomes.

Thank you.

[REDACTED]



Nature Conservation Council

The voice for nature in NSW

8 July 2022

DPE – Water
Locked Bag 5022
Parramatta NSW 2124

By Email: floodplain.harvesting@dpi.nsw.gov.au

Dear Dr. Bentley,

Submission: Draft rules for floodplain harvesting access licences in the Barwon-Darling Water Sharing Plan

The Nature Conservation Council of New South Wales (NCC) is the state's peak environment organisation. We represent over 170 environment groups across NSW. Together we are dedicated to protecting and conserving the wildlife, landscapes and natural resources of NSW.

The rules and volumes being proposed to manage floodplain harvesting in the Barwon-Darling Water Sharing Plan do not support the water management principles of the Water Management Act 2000.

NCC supports the licencing, metering and monitoring of floodplain harvesting in NSW. However, the cumulative environmental and cultural impacts of 40 years of uncapped floodplain harvesting development have not been assessed.

No more than 16.5 GL (1 gigalitre = 1 billion litres) of floodplain harvesting entitlements should be licenced in the Barwon-Darling. This figure is cited as an estimate of average annual floodplain harvesting diversions in the 2012 Barwon-Darling Water Sharing Plan and was used in the development of the Murray-Darling Basin Plan.

NCC recommends that the draft Water Sharing Plan be amended to include:

- flow targets to manage floodplain harvesting diversions that are based on science
- floodplain harvesting licencing that is consistent with 2020 National Agreement on Closing the Gap



Nature Conservation Council

The voice for nature in NSW

- no more than 16.5 GL of entitlements and no rainfall runoff exemption are issued for the Barwon-Darling water source
- accounting rules and annual allocations that are a maximum of 1 ML unit share
- ruling out of trading of floodplain harvesting entitlements
- the removal or modification of unapproved works, including 'hotspot' floodplain works before access licences are issued
- the protection of held environmental water flowing from Queensland from diversion
- clear resolution of issues raised in NCC's non-consensus report as a member of the Healthy Floodplain Review

Thank you for the opportunity to participate in the consultation.

Your key contact point for further questions and correspondence is Melissa Gray, Water Campaigner, available via mgray@nature.org.au and 0431 471 310. We welcome further conversation on this matter.

Yours sincerely,

Jacqui Mumford
Acting Chief Executive
Nature Conservation Council



Nature Conservation Council

The voice for nature in NSW

Submission on the draft rules for floodplain harvesting access licences in the Barwon-Darling Water Sharing Plan

1. Background

The Barwon-Darling/Baaka River is not ephemeral.

It slows down sometimes, and sometimes it stops flowing in parts during a big drought, but there has always been enough resilience in the system to support life. The river has deep holes to provide refugia, functioning groundwater connectivity and healthy wetlands in upstream tributaries mean the Barwon-Darling/Baaka has always been able to support long-lived fresh water mussel populations.

Before the 2017-2020 drought, the Barwon Darling/Baaka never dried up into the series of green disconnected pools from Bourke to the Murray River. The unprecedented mass fish kills at Menindee in 2019 were so horrible they received international attention.

The Natural Resources Commission referred to the Barwon Darling/Baaka as an ecosystem in crisis in its review of the 2012 Barwon Darling water sharing plan and pointed to uncapped growth in floodplain harvesting diversions as a contributing factor.

The culture of overextraction and water theft was exposed in July 2017 with ABC's Four Corners 'Pumped' program. The program sparked a spate of inquiries, including one by NSW Independent Commission Against Corruption (ICAC). The ICAC report fell short of finding corruption but did find a culture in DPE Water of favouring the irrigation industry, and considering First Nations interests and the environment as the enemy.

Extraction in the Barwon-Darling has exceeded the Sustainable Diversion Limit by over 20% every year since the limit was introduced at the start of the 2020 water year. Each year, the reasoning given is that the metering and modelling are failing, and efforts focus on re-jigging the models rather than reducing extraction. Moves towards metering and protecting some types of environmental water are progress, but that progress is slow and the cultural change required to meet the principles of the *Water Management Act* is significant.



2. Flow Targets used as Access Rules

NCC supports flow targets being used in Water Sharing Plans to trigger access to unregulated flows by floodplain harvesting. Flow targets are not just flow volumes, rather they represent the flow conditions that must be present to trigger the take of unregulated flows.

The flow targets presented in the draft Water Sharing Plan are too low to protect key environmental assets. They do not adequately consider the long-term environmental health of the Barwon-Darling/Baaka river. Therefore, the proposed flow targets cannot be aligned with the water management principles of the Water Management Act 2000.

NCC supports the flow targets shown below in [Appendix A](#) that are scientifically founded and based on environmental watering requirements used in the Barwon-Darling Water Sharing plan.

3. Closing The Gap

First Nations inherent right to access water has been undermined through colonisation and displacement. At the time that water access licences were being handed out, the vast majority of First Nations Peoples were dispossessed of their traditional lands. With the granting of Native Title, some land has been returned, but not access to their water.

In the Murray Darling Basin, First Nations Peoples own just 0.17% of the Basin's water.¹

First Nations People have inherent rights, recognised through United Nations Declaration on the Rights of Indigenous Peoples and articulated through the Echuca Declaration², to enjoy the benefits of water access on their Country.

The Echuca Declaration states that “cultural flows are water rights that we hold in our own name and are not held in trust by Government AND provide us with enough clean water to improve all parts of our lives.”³

All governments have a responsibility to re-activate First Nations water rights within the context of ‘water justice’. Allocating brand new water access licences at such a large scale before addressing the lack of Cultural Water provision is a clear abrogation of First Nations inherent rights relating to water and is inconsistent with the 2020 National Agreement on Closing the Gap.⁴

4. Volumes to be licenced

The proposed volume for licencing, 51.32 GL or unit shares, will not keep extraction below the Plan Limit. The total of licenced entitlement should not exceed a total of 16.5 GL, in line with the



Nature Conservation Council

The voice for nature in NSW

estimated floodplain harvesting diversions in the 2012 Water Sharing Plan. This estimated figure was used in the development of the Murray-Darling Basin Plan.

NCC is concerned that the volumes proposed by DPE Water to licence are based on historic take, as opposed to an environmentally sustainable level of take.

The proposed volume of 51.32 GL is considerably different from the figures used in the modelling scenarios. With no clarity on the source of the proposed volumes, and a reference to a particular accounting rule *'in order to achieve the same level of historical diversions'*⁵ in the Community Assistance report, it is difficult for NCC to have confidence in the robustness of the information provided.

NCC does not support any rainfall runoff exemption. All rainfall runoff captured must be licenced, metered and monitored.

5. Accounting Rules

NCC supports:

- No carry over at all on any unregulated water access, including floodplain harvesting. Climate change predictions (presented in NSW Government's Regional Water Strategies) show that floods will become less frequent. Generous 500% carry over allowances would allow very large volumes of water to be taken, as account balances would have time to grow annually to a maximum of five times the licenced entitlement.
- An initial allocation of no more than 1 ML unit share, depending on antecedent conditions.
- Annual allocation is 1 ML unit share or less, depending on antecedent conditions.
- Amendment provisions for all floodplain harvesting management rules to enable rule changes without triggering compensation.

6. Trading

NCC does not support the trading of floodplain harvesting entitlements. Trading is likely to lead to a concentration of floodplain harvesting diversions, most likely upstream. The impact of floodplain harvesting on downstream environmental and cultural assets could be exacerbated further by trading activities.



7. Floodplain Works

No lagoon or natural drought refugia in the landscape should be assessed for, licenced or used for floodplain harvesting. Floodplain Management Zone A and D are areas of high flood flow connectivity and ecological and cultural significance on the Barwon Darling floodplain.

The Community Assistance report states that ‘approximately 90% of properties that will receive a floodplain harvesting (unregulated river) access licence have a work located within management zones A or D’⁶.

The proposed policy that there be no growth in floodplain diversions in zones A and D, and the wording referenced above states that the floodplain harvesting properties in these zones *will* receive floodplain harvesting access licences. **NCC strongly opposes the issue of any floodplain harvesting licences in these zones, and is troubled by the consequences of such a level of high proportion of floodplain harvesting activities.**

No floodplain harvesting access licences should be issued for works that are unapproved and have never been assessed for their environmental impact. This is especially the case for ‘hotspot’ floodplain works, which are works that have changed flow distribution patterns. ‘Hotspot’ floodplain works have been tagged for assessment for many years, yet they remain on the landscape and some may receive validation through floodplain harvesting access licences.

No floodplain harvesting access licences should be issued until all unapproved floodplain works have been removed from the landscape or modified.

8. Protection of Environmental Water

NCC supports the inclusion of rules that protect environmental water from diversion.

Commonwealth taxpayer owned ‘Held’ environmental water that is released in Queensland to perform environmental functions must be protected from diversion by floodplain harvesting activities once it crosses the NSW border.

The draft policy argues that there isn’t enough environmental water in the accounts of the Commonwealth Environmental Water Holder to achieve overbank flows in the Barwon Darling and therefore none of it needs protection. As such, DPE Water is not proposing rules to protect Held environmental water.

This approach assumes that the Commonwealth Environmental Water Holder will never obtain enough water to achieve overbank flows. It also neglects the opportunities to ‘piggy back’ Held environmental water on large natural flows to create over bank flows.



9. NCC Non-Consensus Report – Healthy Floodplain Committee

NCC as a member of the Healthy Floodplain Review Committee raised a number of issues with the assessment of FPH entitlements in the Barwon-Darling. Because of the issues with the Barwon-Darling model outlined below, NCC has no confidence in the results on exhibition for community comment. A non-consensus report submitted to the Deputy Secretary DPE- Water identified the following concerns:

Independence of the Committee Chairperson: The Chair declared a conflict of interest in the decision-making for the Barwon-Darling. He supported all the Department advice that was contested by the NSW Farmers Association and NCC through non-consensus reports.

The modelling process for the Barwon-Darling: Observed inflows from the Border Rivers at Mungindi and modelled inflows from the other major regulated tributaries, the Gwydir, Namoi and Macquarie Rivers are used in the current model. The use of observed flows from the Border Rivers increases the availability of water for FPH by 5 GL but does not allow for future growth in use in Queensland.

Discrepancies in rainfall runoff modelling: for one property, discrepancies in rainfall runoff modelling provided 5 times the volume compared to the low average percentage runoff used across the catchment. This decision was based on history of use and not on fair distribution of water entitlements. This issue was not addressed in the Government response to consensus decisions.

It has been noted that further analysis and work is needed because of the lack of data on rainfall runoff in the arid regions to the west of the Barwon-Darling. NCC has recommended a precautionary approach to this key modelling parameter for determining FPH entitlements.

Changes made to flows identified in the hydraulic model developed for the Barwon-Darling Floodplain Management Plan: Several properties were modelled with lower access flows than those in the hydraulic model. This has enabled larger entitlements and assessment based on history of use.

The lack of consistency across all properties through the modelling process regarding Border Rivers inflows, rainfall runoff modelling and use of the hydraulic model means that a fair and equitable distribution of FPH shares will not occur in the Barwon-Darling, that history of use has been prioritised and that the approach to assessing entitlements has not been precautionary.



Appendix A

Proposed flow targets for inclusion in the Barwon-Darling Water Sharing Plan

Intent

To restrict floodplain harvesting until flows of sufficient magnitude to meet valley and downstream environmental and community needs are forecast to occur with a high degree of certainty.

Rule

No floodplain harvesting in the Barwon-Darling Valley until:

- flows at Barwon River at Mungindi in the last 730 days has exceeded 7,900 ML/day for 5 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Barwon River at Mungindi in the last 1,825 days has exceeded 13,000 ML/day for 5 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Barwon River at Brewarrina in the last 365 days has exceeded 1,000 ML/day for 10 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Barwon River at Brewarrina in the last 485 days has exceeded 9,000 ML/day for 15 consecutive days unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Bourke in the last 365 days has exceeded 1,550 ML/day for 10 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Bourke in the last 485 days has exceeded 15,000 ML/day for 15 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Bourke in the last 1,200 days has exceeded 50,000 ML/day for 15 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Louth in the last 365 days has exceeded 1,500 ML/day for 10 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Louth in the last 485 days has exceeded 15,000 ML/day for 15 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or



Nature Conservation Council

The voice for nature in NSW

- flows at Darling River at Louth in the last 1,200 days has exceeded 44,000 ML/day for 15 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Tilpa in the last 365 days has exceeded 1,450 ML/day for 10 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Tilpa in the last 485 days has exceeded 14,500 ML/day for 15 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Louth in the last 1,200 days has exceeded 41,000 ML/day for 15 consecutive unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Wilcannia in the last 365 days has exceeded 1,400 ML/day for 10 consecutive days unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Wilcannia in the last 485 days has exceeded 14,000 ML/day for 15 consecutive days unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- flows at Darling River at Wilcannia in the last 1,200 days has exceeded 30,000 ML/day for 15 consecutive days unless the Minister is confident that there are sufficient forecast gauge flows to achieve this flow rate and duration; or
- there is less than 450 GL stored in the Menindee Lakes System unless the Minister is confident that there are sufficient forecast gauge flows to achieve this volume.

Floodplain harvesting is not permitted if flows are determined by the Minister to require protection under the *Active Management Procedures Manual*.

¹ [26 May 2021 ABC Indigenous Groups in Murray-Darling Basin fight to have their voices heard over water rights - Ella Archibald-Binge](#)

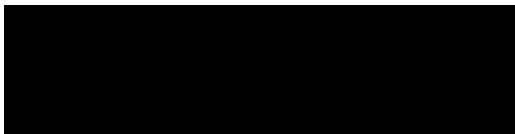
² <https://www.mldrin.org.au/echuca-declaration-final-pdf/>

³ *ibid*

⁴ <https://www.closingthegap.gov.au/national-agreement/national-agreement-closing-the-gap>

⁵ DPE-Water May 2022. Barwon-Darling: Floodplain harvesting in water sharing plans. Report to assist community consultation p 13

⁶ *ibid*, page 18



7th July 2022

SUBMISSION

Proposed amendments to the Barwon-Darling unregulated water sharing plan

July 2022

Submission to:

Department of Planning and Environment – Water
barwondarlingunreg.wsp@dpie.nsw.gov.au

Submission from:



Members of [REDACTED] are very disappointed that several agreements and proposals under these plans have not yet been implemented.

This includes the very important recalibration of meters on the Barwon-Darling, along with the promised recalibration of the Barwon-Darling hydrology model. After 15 years of government inaction on this matter, [REDACTED] users are once again copping the odium of ill-founded findings that we are exceeding our SDL. The promised recalibration of the meters will resolve this SDL issue.

Ironically for those few people who understand the meter calibration and modelling issue, [REDACTED] users we can never reach cap or SDL. In 2006/07, users on the Barwon-Darling were cut back to cap limits via their annual volumetric limit and clumsy trading rules have recently replaced effective trading rules from the original 2012 Barwon-Darling water sharing plan. To reach the limits of the productive pool of water in the Barwon-Darling, users would have to have perfect access and perfect trading. Neither are available to water users on the Barwon-Darling.

In this submission, [REDACTED] is calling for a return to the sensible interim trading rules that were implemented in the original BD water sharing plan of 2012.

In its Western Regional Water Strategy, the NSW government says there is no intention to reduce SDLs under the Basin Plan. Unless the rules are changed to reflect the rules originally included in the 2012 Barwon-Darling Water Plan, this issue will continue to hamper and unnecessarily restrict water users on the Barwon-Darling

Our other major disappointment is the lack of action on rectifying the poor distribution of Individual Daily Extraction Components through the Barwon-Darling Water Sharing Plan 2020. Again, the Barwon-Darling Water Sharing Plan of 2012 had the distribution right and there were no problems. The redistribution under the 2020 plan was an exercise in poor implementation.

At the time, the members of [REDACTED] recognised this and called for an anomalies process to deal with any difficulties caused by this distribution, but this suggestion was not accepted by DPIE.

Following are more detailed comments on each proposed amendment:

Allow for temporary dealings (trade) of individual daily extraction components

The DPE Fact sheet makes following statement:

When IDECs were introduced in 2020, the plan allowed permanent trade of daily flow shares under section 71Q of the Water Management Act 2000 (the Act). At that time, the plan noted the temporary trade of IDECs would be considered in future. This was to allow time to develop policies and systems that would ensure WaterNSW could implement such trades and that other water users and the environment would not be affected.

The first statement is incorrect, and unless we learn from the past, we cannot fix this problem in the present or the future.

The inclusion of IDECS, originally called Individual Daily Extractions Limits (IDELs), were agreed to by all stakeholders in the making of the Barwon Darling Water Sharing Plan 2012, and they were included in that plan. They were not implemented at the time, but it is wrong to say they were introduced in 2020. They were introduced in the 2012 plan under a slightly different name – introduced but not implemented.

IDECS should reflect the provisions of the original Barwon-Darling Water Sharing Plan which was agreed to be all stakeholders.

They also need to be implemented in a transparent way as intended by the plan (as outlined on page 54 of the “Background Document” to the original plan:

6.2.6.1 Establishing individual daily extraction limits in the Barwon-Darling:

In the Barwon-Darling Unregulated River water source, individual daily extraction limits (IDELs) are intended to provide a mechanism to limit extraction rates to those currently permitted through authorised pumps, thereby allowing a free and open trading regime whilst limiting:

- *third party, and*
- *environmental impacts.*

The administrative and management systems required to successfully implement IDELs are not currently in place, however it is expected that they will be in place within the first few years of this plan’s term.

6.2.6.1.1 Defining extraction rates of authorised pumps

WA 1912 licensed entitlements in the Barwon-Darling do not specify the pumping rates of the authorised pumps attached to the licence, rather their maximum size. Further, there are significant variations in the ‘true’ pumping rate of two identically sized pumps at different locations on the Barwon-Darling, primarily due to head differences (difference in elevation between the water surface and the pump discharge), but also the age and design of the respective pumps. Notwithstanding this, ‘average’ pump capacities are recorded for various sizes and types of pumps in the NSW Office of Water Licensing Administration System and these rates were historically used for assessing environmental impacts for new licence applications. Unique to the Barwon-Darling, all active metered pumps have an ‘agreed pumping rate’ with State Water Corporation as a consequence of time and event metering.

Within the water source, the number of installed pumps is less than the number of authorised pumps and so the IRP intended from the outset that individual daily extraction limits could be established within the Barwon-Darling in a manner which did not impinge on the rate of extraction from current pumps.*

* Please note that the intention from the outset was that: ***individual daily extraction limits could be established within the Barwon-Darling in a manner which did not impinge on the rate of extraction from current pumps.***

Temporary trading of IDECs was recommended by the Natural Resources Commission in its 2019 review of the plan, and by the ‘Claydon review’ of 2021, which assessed the initial implementation of the resumption of flow rule, IDECs and active management rules in the BD plan.

Licensees who were disadvantaged by having their IDECs drastically reduced, in an unintended way in the 2020 plan, and now have pump capacities larger than their IDECs, have requested that these anomalies be rectified.

One way to assist with this problem (but not completely solve the inequities caused by the 2020 redistribution of IDECs) is to allow temporary trade of IDECs. However temporary trade of IDECs is something that should have happened by now anyway and was always intended under the principles of the Water Management Act and Basin Plan principles.

Temporary trade may assist with this problem, but it will not address the current inequity and unfairness of the clumsy 2020 redistribution of IDECs which has had the effect of impinging on the rate of extraction of a select number of (mainly small) water users.

DPE must do its best to address the work health and safety risks that have been caused by the 2020 redistribution. These risks relate to some water users having to turn pumps on and off each day during an access event to ensure they do not exceed their IDECs.

Members of [REDACTED] agree with this rule change, but we believe it does not go far enough. We have consistently called for an anomalies process to allow those people who have had their IDECs reduced below their established 2012 pumping capacity to put their case for an increased IDEC. There are not many of these and they are small water users.

An individual daily extraction component (IDEC) is the daily volume of water that may be extracted under an individual water access licence once WaterNSW has announced flow class access for that licence.

Under the original Barwon-Darling Water Sharing Plan 2012, these IDECs, or IDELs as they were called then, were distributed according to the pumping capacity of each water user.

During the SAP process leading to the new water sharing plan, DPIE explained at public forums that, back in 2012, it did not have the appetite or resources to implement IDELs as included in the 2012 Plan. This delay in implementation of IDELs/IDECs and subsequent trading without IDELs, created a problem for water users today.

These IDEC/IDELs were already agreed to by all stakeholders in the making of the original Barwon Darling Water Sharing Plan. They were also agreed on the basis that permanent and temporary trade of these IDECs would be available to water users.

[REDACTED] agreed at that time that IDELs would be the daily volume of water that could be extracted under an individual water access licence, when pumping conditions were satisfied. The individual IDEL volumes were allocated to each water access licence according to an agreed daily pumping amount.

After failure to implement the original IDELs, DPIE in 2018-2020 had to establish how to distribute and implement the IDELs without creating inequity between licensees after trade

had taken place for the last 5 years of the original plan – without the accompanying trade of IDELs. The wrong lever was pulled by basing the IDELs on licence volume rather than pump capacity. This led to the problem of some licensees have IDECs more than historical use and some licensees have less than historical use – a gross inequity.

Our members support the proposed rules for temporary trade of IDECs as proposed today.

However, we do not think that this amendment goes far enough to solve the equity issues created by the clumsy redistribution of IDECs under the 2020 Barwon-Darling Water Sharing Plan – which has created unintended outcomes for water users along the Barwon-Darling.

Furthermore, there is no more rationale at all for trade restrictions on IDECs

The original IDELs anticipated free trade on a permanent and temporary basis, not restricted within river sections, consistent with Basin Plan principles and the principles of the NSW Water Management Act 2000.

Unless there are very good reasons for these anticipated restrictions, good reasons that are articulated and accepted by stakeholders, [REDACTED] supports the free trade of IDECs within the Barwon-Darling River system, on a permanent and temporary basis.

Basin Plan principles

Overlaying all this is the fact that DPE must have regard to certain principles, including the principles outlined in the Basin Plan and principles set by the NSW government for water resource planning.

Basin Plan principles state that in water resource planning:

- *There will be no adverse impacts on water available to a water access licence holder;*
and
- *There will be no reduction in the protection of planned environmental water.*

The implementation of IDECs in 2020 had an unintended, direct, and measurable impact on water available on a daily basis to certain water access licence holders. This must be fixed.

The NSW Government principles for water resource planning also state that “*water resource plans will be cost neutral for NSW license holders*”

[REDACTED] will not “negotiate away” the access rights of its members. We ask that the daily extraction right of all [REDACTED] access licence holders be restored, and that free temporary trade of IDECs be implemented at the earliest opportunity.

Amendment of access announcements

DPE is proposing to add a rule in clause 49A to allow access announcements to be amended by WaterNSW within 24 hours if there are inaccuracies between forecast and observed flows.

These situations occur in circumstances such as local rainfall events or when actual flows exceed modelled forecast flows.

Before the introduction of active management, licensees could respond to increases in flows at gauges when they were observed.

Under present arrangements, access announcements based on forecast flows, remain in place for 24 hours or longer. If greater flows than forecast are observed, then WaterNSW, under present plan rules, must wait 24 hours from the initial announcement before making the next announcement.

The change allows WaterNSW to announce increased access when more water than forecast is observed in the river because of local rainfall events or differences in predicted and actual travel time of flows.

Allowing access announcements to be amended means WaterNSW could account for differences between forecast and observed flows, while maintaining the transparency and integrity of active management. These announcements should be recorded using existing processes and made available to relevant agencies for compliance and reporting.

It is anticipated that, if more water is observed in the river than forecast, an amendment could be made to increase access without waiting for the next announcement. If less water than forecast is observed, corrections would still be made in the following day's announcement.

██████████ agrees with this sensible proposal for the reasons outlined above, and because this small rule change may assist in water users on the Barwon-Darling reaching towards their unattainable SDL.

Flow class announcements when one of two reference gauges is not working

DPE is proposing to repeal and replace subclause 49A (5) to remove the requirement that currently applies in management zones that usually rely on flow thresholds at 2 reference gauges to determine flow class announcements.

The proposal is to use only one flow class threshold if actual flows cannot be observed at the second gauge.

This change reflects the current method used for determining announcements, which compares forecast flows to flow class thresholds.

Flow classes in 11 of the 14 Barwon–Darling management zones rely on flow thresholds at two gauges to determine if access is granted or not. When flows cannot be gauged at one of these locations because the gauge is not working or is flooded, the plan requires access for that flow class to be set using only the threshold at the functioning gauge.

If the downstream gauge is not working, the flow class access is granted based on forecast flows at the upstream gauge. This can result in access being permitted when there is not enough water across the entire zone.

The change is also proposed to allow the best data to be used for determining flow class announcements. The forecasting system continues to produce forecast flows at every gauge regardless of the availability of observed flows at those gauges.

This change would allow WaterNSW to use the best available data at multiple reference points to set flow class access in situations where one of two flow reference gauges is not working. If the most downstream of the two gauges is not working, this change will increase the likelihood that the flow event is in the whole management zone before access is granted, ensuring users only take water available for extraction.

██████████ agrees with this proposal for the reasons outlined above.

Clarifying the relaxation of the resumption of flows rule

In 2020, a ‘resumption of flows’ rule was introduced in the Barwon–Darling water sharing plan (clause 50), to protect critical first flows after an extended low-flow or dry period.

The rule is activated when a flow arrives after a long period of dry or low-flow conditions. This is to prevent access to the first flow for a short period. Once required downstream flow targets are met, normal access conditions are reinstated.

DPE is proposing to amend the wording to clarify how the flow trigger at Bourke operates. This trigger turns off access restrictions when certain conditions have been met.

The proposed amendment will make it clear that the flow trigger of 30,000 megalitres passing along the Darling River at Bourke is a cumulative total flow. It will also clarify that flows start contributing to the 30,000Ml target from the start of the most recent low-flow or dry period, when flows have been less than 200Ml/day for more than 90 consecutive days at Wilcannia.

The proposed change is in response to the Claydon review, which recommends *‘being clearer about what constitutes an “event”, including its start and end conditions and dates’*.

██████████ agrees with this proposal to clear up any misunderstanding about how the trigger works. The new wording should clarify key aspects of the trigger, and how the trigger is intended to be implemented.

Floodplain harvesting provisions

Floodplain harvesting has increased across the NSW northern basin, including in the Barwon-Darling unregulated water source.

In some cases, water diversions have increased above legal limits set under water sharing plans and the Basin Plan.

DPE intends to include floodplain harvesting provisions and regulations in the water sharing plan to regulate the practice of floodplain harvesting and to restrict growth in diversions.

The NSW Floodplain Harvesting Policy sets out the process for bringing floodplain harvesting into the water licensing framework. It involves creating new work approvals, licences, rules, and ways of measuring floodplain harvesting to ensure that harvesting take can be managed within the legal limits.

Account management rule of an account limit of 5MI per unit share

DPE testing shows that annual accounting arrangements are likely to result in future growth that would require a response action, such as reduced allocations.

Also, future changes to development, behaviour or trade could lead to an increase in the use of these entitlements that would drive growth.

For these reasons, [REDACTED] supports the proposed 5-year accounting arrangements for floodplain harvesting (unregulated river) access licences in the Barwon-Darling Unregulated River Water Source.

This accounting period also matches the frequency of accessing floodplain harvesting water while controlling growth, delivering environmental outcomes, and providing flexibility to licence holders.

Available water determinations

In many other circumstances, an available water determination greater than 1 MI per unit share has been applied to access licences in the first year of a water sharing plan.

This ensures the volume of water in water accounts reflects the potential amount of carry over that would have been permitted under the WMA, or use of long-term averages in the determination of the access licence entitlement.

With these things in mind, [REDACTED] believes that the initial available water determination should be greater than 1MI per unit share in line with historical practice.

For most NSW licence categories, an available water determination of 1MI per unit share is specified for each year after the first water year. For some licence categories, such as regulated river (general security) access licences, an available water determination of greater than 1MI per unit share is permitted if there is sufficient water available.

[REDACTED] supports the proposed available water determination rules for floodplain harvesting (unregulated river) access licences in the Barwon-Darling Unregulated River Water Source is 1MI per unit share every year after the first year but believes the initialization volume should be greater.

Permanent trade

Permanent trade rules are included in water sharing plans to protect sensitive areas from extraction that may occur because of entitlements concentrating in a specific location.

Schedule 3 of the Basin Plan 2012 recommends free trade of surface water except where a restriction is required due to a physical constraint, lack of connectivity, or the environment may be harmed. Trading restrictions must be justified to the MDBA.

While free trade is desirable, the Barwon-Darling may be impacted by trade that results in an upstream concentration of entitlement. Trading within river sections may prevent this concentration of entitlement and may protect areas that rely on flood flow connectivity or contain identified environmental or cultural assets.

DPE proposes to set rules to restrict the permanent trade of floodplain harvesting licences that reflect existing trade rules for unregulated river access licences.

This involves replicating the four river sections that currently exist in the Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012 and restricting trade between those sections.

The proposed trading zones will ensure that floodplain harvesting (unregulated river) access licences only take water within the Barwon-Darling Valley floodplain, consistent with the NSW Floodplain Harvesting Policy and licence determination process.

[REDACTED] supports these proposals for permanent trade of floodplain entitlements on the Barwon-Darling.

Access rules

In the Water Sharing Plan for the Barwon-Darling, there are access rules govern unregulated river water access licences, mainly through cease and commence to pump rules based on river gauge data and volumetric limits on access licences.

Access rules for the Barwon-Darling unregulated water source are designed to protect flows to maintain and improve environmental values.

These access rules are not appropriate for floodplain harvesting licences as they are attempting to manage very different flows.

However, to acknowledge connectivity between the Barwon-Darling and the northern inland tributary valleys, and ensure flows are temporarily protected from floodplain harvesting during and following extreme dry periods, DPE proposes new access rules for floodplain harvesting access licences in the northern basin.

These include proposed access rules for floodplain harvesting (unregulated river) access licences in the Barwon-Darling as follows:

Joint Submission on proposed amendments to the *Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012*

By

[Redacted]

[Redacted]

[Redacted]

[Redacted]

*: authorship is alphabetical

[Redacted]

8 July 2022

Foreword

Please accept our joint submission with respect to the *Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012*. This joint submission is in three key parts:

(1) **Critical need for reduced water extractions particularly from various forms of floodplain harvesting** to halt further reductions in stream flows, as measured by flows in the Lower Darling (Baaka) River. Further, it is critical that each of the Water Sharing Plans for the connected tributaries of the Barwon-Darling and Lower Darling rivers be comprehensively integrated in terms of water flow requirements for the whole river system ([REDACTED]);

(2) **Need to fully incorporate water quality requirements within the water sharing plan** [REDACTED] [REDACTED]); and

(3) **Seven recommended amendments to the water sharing plan** in relation to: cultural water allocations, low security licensing, trigger targets, and system connectivity [REDACTED]).

1. Water Extractions and Stream Flows ([REDACTED])

Water diverted for floodplain harvesting along the Barwon-Darling and its tributaries is currently largely unregulated, poorly documented, and not properly recorded, but the annual average diversions have been estimated at between 632 and 926 billion litres (GL) in NSW (Brown et al., 2022). According to Brown et al. (2022), storage capacity rose from 557 GL in 1993–94; to 1 1,393 GL in 2019–20. By comparison, *recorded* annual water extractions averaged 862 billion litres over the period 2004-5 to 2019-20 in northern NSW MDB (and are in the order of 1,700 billion litres in total from all tributaries (Grafton et al., 2022).

Large water extractions for irrigation along the Darling River, primarily in its upper catchment and its tributaries, contributed to the 1991 blue–green algal bloom that stretched for over 1,000 km (Bowling et al. 1996), and also to declines in abundance and diversity of native fish (Gehrke et al. 1995). The possible effects of water extractions on streamflow were investigated following the 2019 Menindee Fish Kill (Jackson et al. 2020). This investigation highlighted the importance of habitat connectivity for fish spawning and fish movement along the Darling River, including its lower reaches known as the Barka River.

Importantly, Grafton et al. (2022) find that over that past 40 years, increased water extractions have contributed to more than half of the recent decline in annual mean streamflow on the Lower Darling River. In addition, their analyses show there is a declining trend in stream flow as result of increased drying. This means **that to maintain recent stream flows there must be a reduction in overall water extractions and associated water consumption.**

Grafton et al. (2022), and others, show that streamflow declines have reduced waterbird abundance which is strongly associated with breeding frequency. Streamflow decline, which has increased in the past 20 years, has diminished the abundance and resilience of waterbirds in the Lower Darling (Baaka) River. There is an abundant literature that water extractions, including from floodplain harvesting, has contributed to large and on-going losses in ecosystem services in wetlands and riparian environments (Australian Academy of Science, 2019; Kingsford et al., 2017; Thoms and Delong, 2018).

Thus, in our view, it is critically important that Barwon-Darling Water Sharing Plan:

- (1) Reduce overall water extractions to the Barwon-Darling and its tributaries and,**
- (2) In particular, reduce water consumption associated with floodplain harvesting.**

While it is a common premise that the Barwon–Darling River has a highly variable hydrology with long periods of zero flow, there is now strong evidence (Mallen-Cooper and Zampatti, 2020) that this premise is incorrect. The evidence is that during long severe droughts, there have always been persistent base flows supporting lotic habitats; and near annual, landscape-scale flow pulses. It is these lotic habitats that support mussels and snails which are fundamental drivers in the food chain for native fish assemblies and crustaceans. This new understanding presents a significant opportunity to improve ecosystem integrity by recovering these key ecohydraulic facets of the natural flow regime through integrated water management, alternative sources of water for consumptive use during low flows, and weir rationalisation. The careful analysis of past data provides insight into a Barwon– Darling River ecosystem that supported lotic biota and people for millennia, even with low inflows in extreme droughts. This context enables an ecohydraulic perspective of the river that helps explain present impacts, provides new directions for river management, and clarifies choices for stakeholders. It is critical that this knowledge be incorporated in the Barwon Darling Water Management plan.

Currently, catchment specific Water Sharing Plans operate largely independently and have little or no requirement to pass water from upstream storage dams to the Barwon– Darling River (e.g., Water Sharing

Plan for the Gwydir Regulated River Water Source 2016, <https://legislation.nsw.gov.au/#/view/regulation/2015/629>, accessed 3 January 2020). The impacts of this compartmentalised water management are exaggerated in a system like the Barwon–Darling which receives most of its water from tributaries. Consequently, linking operation of storage dams and tributaries so they contribute to low flows in the Barwon– Darling is key to the future health of the river (Mallen-Cooper and Zampatti, 2020).

Thus, in our view, it is critically important that:

- (1) The Water Sharing Plans of *all* the tributaries of the Barwon-Darling be connected and integrated to yield the flow requirements of the Barwon-Darling and**
- (2) Stream flow requirements of *all* tributaries be transparently included in the Barwon-Darling Water Sharing Plan.**

2. Town Drinking Water Quality Needs and Requirements ()

The licensing of floodplain harvesting authorises and formalises one of the key causes of the deteriorating health of the Barwon-Darling/Barka in recent decades. In order to secure the 'social license' for this reform, the NSW Government will need to build trust with downstream communities that any negative impacts will be identified, managed, and addressed.

One of the key concerns for communities along the river is insecurity and poor quality of town water supplies. Submissions to and the final report of the Natural Resources Commission (2019) review of the Barwon-Darling Water Sharing Plan (WSP) documented the costs to communities and households from purchase of bottled water, higher water treatment costs, water carting, water restrictions, negative physical and mental health outcomes, and unacceptable quality of alternative groundwater supplies.

The Australian Drinking Water Guidelines (ADWG) are the national framework for describing, managing, and monitoring drinking water quality from catchment to consumer. Health-based and aesthetic guideline values across microbial, chemical, and physical characteristics provide a basis for state/territory regulations across all jurisdictions in Australia. The guideline values are defined to ensure "good quality water – that is, water that is aesthetically pleasing and safe, and that can be used without detriment to fixtures and fittings" (ADWG 2022, p. 79). Numerical guideline values are defined for 6 physical aesthetic characteristics (true colour, turbidity, hardness, total dissolved solids, pH, temperature, and dissolved oxygen), whereas the benchmark for taste and odour is defined as "not offensive to most people" (ADWG 2022, p. 189).

Section 3.10.2 of the ADWG state that water suppliers should produce an annual public report summarising performance against numerical health-based and aesthetic guideline values to support evaluation of service improvements and "ensure that drinking water quality management is open and transparent" (ADWG 2022, p. 57). **New South Wales is the only jurisdiction in Australia where that guideline is not actioned through regulation nor as an industry norm.**

The **ADWG guideline values are specifically referenced in Section 9.05 of the Murray-Darling Basin (MDB) Plan** regarding the following objectives for raw water for treatment for human consumption:

- "(a) to minimise the risk that the quality of raw water taken for treatment for human consumption results in adverse human health effects;**
- (b) to maintain the palatability rating of water taken for treatment for human consumption at the level of good as set out in the ADWG; and**
- (c) to minimise the risk that the quality of raw water taken for treatment for human consumption results in the odour of drinking water being offensive to consumers."**

In contrast to the ADWG and the MDB Plan, **the WSP social and cultural objectives for the quality of water supplied to towns are imprecise. Target ranges for town water supply are mentioned but not specified (Part 12A (2c.)).** The most relevant performance indicators appear to be the changes or trends in social or cultural benefit associated with "the recorded values of water quality measurements including salinity, harmful algal blooms, total nitrogen, total phosphorus, pH, water temperature and dissolved oxygen" (Part 12A (5d.)).

Section 5.1.4 of the draft Water Resource Plan (DPE 2019, p.34) states that specific targets with reference to the ADWG are defined in the Drinking Water Management System for each of the four water providers in the Barwon-Darling Water Resource Plan area: Bourke Shire Council, Brewarrina Shire Council, Central Darling Shire Council, and Walgett Shire Council. Of these four, only the Walgett DWMS is made publicly

available on the council's website (<https://www.walgett.nsw.gov.au/wp-content/uploads/2021/02/Walgett-DWMS-August-2020.pdf>). **It is not clear what specific target values for raw water quality are specified in relation to the seven characteristics mentioned in the WSP nor the broader set of characteristics where guideline values are defined under the ADWG.**

There are currently no defined water quality targets for raw water for drinking water supplies drawn from the Barwon-Darling/Barka within the water management framework. The NRC (2019, p. 122) review of the WSP recommended that the plan be revised to clearly state the link between water quality measurements and objectives. It appears that this has not occurred in the context of town water supplies. Such targets could be developed with communities, local businesses, local water utilities, and inform related DPE-Water programs, such as the Town Water Risk Reduction Program.

Even if there were defined targets in the WSP, there is currently no recourse for residents of Barwon-Darling towns to establish whether they were being met nor how poor raw water quality affects their drinking water supplies. Unlike every other Australian state and territory, drinking water providers in New South Wales are not required by regulation to publicly report drinking water quality monitoring against the guideline values of the ADWG. Drinking water management is not open nor transparent in New South Wales. NSW Health (2022) provides free testing of microbial and other health-related parameters to local utilities, but the results are stored in a database that is not publicly accessible. The Local Water Utility Performance Dashboard (DPE 2022) provides aggregated statistics across microbial and chemical performance for the entire supply system, not individual towns nor parameters (see Table 2.1). No data is provided for aesthetic characteristics. It is unclear how the information in Table 2.1 could support residents of Wilcannia, Bourke, and other towns on the river to understand how their drinking water quality has changed over time for specific contaminants and why.

The lack of transparency on drinking water quality is a broader issue in NSW beyond the immediate scope of the revisions to the Barwon-Darling WSP. However, it is consistent with a pattern where: **(a) drinking water quality is not given a priority in the water resource management process, and (b) the risk of poor raw water quality for town supplies is allocated to, and managed by, local water utilities** and the communities they serve, not state government agencies and upstream water users.

In sum, we recommend that current revision to the WSP ensures that NSW-DPE work with stakeholders to define water quality targets for town water supplies and other water uses that enable the measurement of performance over time. These enabling actions, combined with greater transparency over drinking water reporting, would inform evidence-based consideration as to whether floodplain harvesting, and other upstream extractions, are harming the health and well-being of downstream communities in terms of drinking water quality.

	% total population served where ADWG microbiological compliance achieved				% total population served where ADWG chemical compliance achieved				Other sources of information on town drinking water quality
	16-17	17-18	18-19	19-20	16-17	17-18	18-19	19-20	
Bourke Shire Council	100	100	100	100	100	100	72.00	100	State of Environment report lists number of times drinking water quality guidelines not met (https://bourke.nsw.gov.au/wp-content/uploads/2022/01/2016-21-Bourke-SoE-report.pdf)
Brewarrina Shire Council	97.39	99.25	100	100	90.00	100	90.00	100	“The water business also reports to NSW Health on matters of drinking water quality” (https://www.brewarrina.nsw.gov.au/engineering/water-sewerage.aspx)
Central Darling Shire Council	100	100	100	98.01	75.00	100	75.00	100	No information provided on drinking water quality (https://www.centraldarling.nsw.gov.au/Infrastructure/Water)
Walgett Shire Council	100	99.62	100	100	96.67	100	80.00	100	Raw and summary data from 2012-2017 in the Drinking Water Management System report published in 2020 (https://www.walgett.nsw.gov.au/wp-content/uploads/2021/02/Walgett-DWMS-August-2020.pdf)

Table 2.1. Drinking water quality data for town water supplied from the Barwon-Darling/Barka River 2016/17-2019/20

Data self-reported by local water utilities to the NSW Local Water Utilities Performance Monitoring Database (DPE 2022). Note that Walgett’s primary potable water supply is the Namoi River, but Collarenebri in Walgett Shire Council sources potable water from the Barwon River.

3. Responses to Proposed Amendments in the Water Sharing Plan ([REDACTED])

Water Sharing Plan rules and management of flows that meet the ongoing needs of the lower Darling community have been and continue to be insufficient. This submission is based on recent reviews of the Barwon Darling Water Sharing Plan (Natural Resources Commission 2019), reports investigating the Menindee fish kills in the lower Darling (Australian Academy of Science 2019, Vertessy et al. 2019, Maloney et al. 2020), as well as the ongoing and consistent community responses to water management that demand more equitable Water Sharing Plan (WSP) Rules, as outlined in various inquiries and local news reporting.

Additionally, this submission is based on the recent consultation held by DPE Water at Menindee on the 15th of June, and notes made by Daniel Schulz based on discussions with community and responses of New South Wales Department of Environment staff.

In our view, those sources listed above document that the proposed amendments for the Barwon Darling Water Sharing Plan are insufficient to meet goals and need further review. In particular, they do not meet their obligation to provide “critical human needs over other extractive uses” (Natural Resources Commission 2019) and they do not address the ongoing failure of the WSP to meet its policy goals which are to maintain and improve:

- (a) the **health and enhancement of the water source** and its water-dependent ecosystems;
- (b) the **continuing productive extraction of surface water for economic benefit**;
- (c) the spiritual, social, customary and economic benefits of surface water to Aboriginal communities;
- (d) **social and cultural benefits to urban and rural communities that depend on surface water.**

The **Barwon-Darling Water Sharing Plan and its proposed amendments are inadequate because:**

1. **Aboriginal Cultural Water Allocation has not been legislated in the WSP:** There is still no allocation in the BDWSP for Aboriginal cultural water access licenses and this needs to be addressed in the WSP as it is a policy goal of the WSP to maintain and improve spiritual, social, customary and economic benefits of surface water to Aboriginal communities.
2. **Low security licensing rules have not been sufficiently revised:** Unlimited carryover and 300 percent take rules have increased access to low flows and contributed to the impact of critical dry periods – and as per the Natural Resource Commission’s 2019 review of the BDWSP, any modelling suggesting the carryover provision does not impact the critical dry periods must be revised, and the unlimited carryover and 300 percent take rules must be changed to address the impact of these licensing rules on ongoing water insecurity in the lower Darling.
3. **Trigger targets for Critical Dry Periods are insufficient:** The proposed trigger targets that determine when first flush management arrangements start and when they cease to apply, are *completely inadequate* and do not effectively mitigate risk or reduce the impact of cease-to-flow events on the human and animal communities of the lower Darling
4. **System Connectivity Targets are insufficient:** System Connectivity must include end of catchment flows in the Barwon-Darling catchment which reach the Murray River at Wentworth. Pre-emptively, during and immediately after critical dry periods an end of catchment flow target should be met *before* temporary water restrictions are lifted.
5. **The lower Darling has no Water Sharing Plan:** The lower Darling continues to have no Water Sharing Plan and without adequate in-flow targets to Menindee Lakes (the ‘Menindee Lakes Critical Storage

Triggers' is far from sufficient to being an appropriate in-flow target at Menindee), the lower Darling and its critical human and environmental needs are not provided for in the WSP arrangements.

Community has consistently stated that the Water Sharing Rules in the Barwon-Darling Catchment are skewed toward access rules that benefit the irrigation industry upstream of Bourke, and negatively impact the human and environmental needs of the lower Darling.

3.1 Cultural Water Allocation has not been legislated in the WSP

There is no allocation within the WSP for Aboriginal uses of water (cultural flows) despite it being one of the four main objectives of the WSP; to maintain and improve the “the spiritual, social, customary and economic benefits of surface water to Aboriginal communities.” As stated by Barkandji Elder Badger Bates, “...without the Barka - the Darling - we have no culture, no name, because the Barka is our mother... They talk about a ‘water sharing’ plan - where’s our water, where’s our share?” (De Groot 2018)

The NSW Government is failing at basic engagement protocols with First Nations groups. As stated in the Claydon Review, a key recommendation is to “progress conversations with First Nations people in relation to information needs and engagement protocols, as well as values, uses and objectives for water, including those impacted by resumption of flows and active management of flows.” (Claydon 2021) Recommendation 16.

At the consultation at Menindee on the 15th of June, there were no First Nations identifying people at this event, and therefore the process for engaging key community members in the lower Darling during the public exhibition period is inadequate and this policy review process has failed the basic requirements to engage Traditional Owners and First Nations people.

Furthermore, **the ongoing failure of water policy to provide for Aboriginal cultural and customary uses in the catchment via the provision of Cultural access licenses is subject to sustained criticism from scholars as well as community members (Natural Resources Commission 2019; Hartwig et al. 2020; Maloney et al. 2019; NSW 2021a). This needs to be addressed in the WSP as it is acknowledged by the NSW Government that “a framework that more clearly outlines how these applications are considered needs to be developed.” (NSW Department of Planning 2020) This should be developed in the WSP Plan and become an integral part of WSP rules.**

3.2 Low security licensing rules have not been sufficiently revised

Access rules that allow low security water licenses to access water during moderate to dry years are untenable. **Supplementary water licenses, floodplain harvesting, and A class licensing rules must be changed to protect river flows and surface water during moderate to dry years.** It has been found by the (Natural Resources Commission 2019) that A Class licenses have contributed to the length and impact of cease-to-flow events by legally extracting low flows. A Class licenses were originally designed to protect permanent plantings during drought years; however, they are being used for cropping purposes.

These rules must change to protect the lower Darling and mitigate the risk of cease-to-flow and low flow events impacting the human and animal communities of the lower Darling.

3.3 Trigger targets for Critical Dry Periods are insufficient

Current triggers that determine when first flush management arrangements start and when they cease to apply are completely inadequate and not based on best available science, historical evidence, or local knowledges. This is clear when it comes to the 195GL total storage target in Menindee Lakes. During the consultation period at Menindee on the 15th of June, staff at DPE Water could not explain how the ‘Menindee

Lakes Critical Storage Triggers' had been determined and why this critical storage trigger was determined as 'total storage' rather than 'active storage' (Personal communication). It is understood that 195GL had come from modelling done by WaterNSW (NSW Department of Planning and environment 2022, p. 14), however there is zero analysis of this modelling by DPE, and there is zero assessment of its adequacy by DPE.

According to the community consultation at Menindee on the 15th of June 2022, and a very basic review of the previous critical dry period (2018-2020), 195GL of total storage does not come close to "12 months of water for human needs and minimum water sharing plan releases." (New South Wales Department of Planning and Environment 2022b). There was also no reason or justification for making this figure 'total storage' as opposed to 'active storage.' Given that dead storage volume within the Menindee Lakes system is 125GL (NSW Department of Industry 2018), this trigger point could leave Menindee Lakes with only 70GL of active water than can be used to manage the lower Darling during critical dry periods.

In our view, 195GL of total water storage is inadequate given that the purpose is to reduce the impact of critical dry periods and meet downstream needs. According to the historical data of Menindee Lakes Total Storage Volume provided by the MDBA, during the last critical dry period (late 2017-early 2020) the total storage volume of MLS was recorded to be 195GL in August 2018. By December 2018 the first fish kill in the lower Darling had occurred and another in January 2019. Within this 5-month period, the 195GL of total storage in ML was not effective in any way at providing algal suppression flows for the Lower Darling. Had Menindee Lakes volumes been retained, and releases minimised, it was found by Vertessy et al. (2019) that any additional volumes available to manage water quality would have "enabled more effective mitigation of the recent fish death events by increasing releases to breakdown stratification." **Storage to provide algal suppression flows during critical drought periods should be an objective of the WSP, and 195GL of total storage does not achieve this goal.**

According to *Draft Western Regional Water Strategy: Attachment E: Critical dry condition triggers to reduce risk to environmental and human water needs Discussion Paper*, the Department has "also considered a draft trigger that would provide up to 2 summers, or 18 months, supply in Menindee Lakes under no inflows, but still with required water sharing plan releases which meet town, domestic and stock, and commercial needs. *We did not progress this* because significantly larger volumes of water would be required to be stored in lakes Pamamaroo and Copi Hollow that would also mean that a substantial amount of that water would be lost to evaporation." (Emphasis added)

By not progressing this necessary option to manage risk in the lower Darling, the Water Sharing Plan is not achieving its intended aims. As discussed by the *Review of the Water Sharing Plan for the Barwon-Darling Unregulated and Alluvial Water Sources 2012*, "The Plan rules should be designed in line with the Act's principles. That is, to primarily achieve environmental outcomes, with a subsequent objective to protect basic landholder rights, and beyond this to minimise impacts to other extractive users." (Natural Resources Commission, p. 113)

By not progressing options which achieve the minimum requirements of the WSP to provide critical needs for the lower Darling community and effectively manage risk of critical dry periods, the NSW Government is being negligent.

Targets that are more appropriate to meet the Plan's obligations have been suggested by community members and documented in *Investigation of the causes of mass fish kills in the Menindee Region NSW over the summer of 2018–2019, by Australian Academy of Science*: "It will be important to continue to regulate water for downstream use and hold water primarily in Lake Pamamaroo, Lake Wetherill and Lake Tandure; based on local advice, we suggest that the system be managed to maintain at least 400 GL of accessible water in these upper lakes." (Australian Academy of Science 2019, p. 34).

3.4 System Connectivity Targets are insufficient

During critical dry periods and cease-to-flow events, trigger targets that determine when first flush management arrangements cease to apply, must include *end of catchment flow targets*. These targets should be met *before* temporary water restrictions are lifted. This would be conducive to community definitions of river connectivity as outlined in the following inquiries and reports:

Rationale for, and impacts of, new dams and other water infrastructure in NSW: Part 2, Portfolio Committee No. 7 – Planning and Environment (NSW Parliament 2021a, pp. 54-55, detailing submissions made by community members to the inquiry about connectivity)

Report no. 1 - Floodplain harvesting - Select Committee on Floodplain Harvesting (NSW Parliament 2021b, p. p51 detailing submissions made by community members to the inquiry):

“We need adequate measurement for the whole length of the river systems to know exactly what is going on and where the water is. At the moment we have the biggest problem where the northern Basin and the southern Basin are basically broken in two where they have separated the Darling River at Wilcannia, where we have minimal flow targets at Wilcannia of 10 days, 400 megalitres, which does not actually make it to Menindee at all. We feel that the storage targets at Menindee and flow targets the length of the Barwon-Darling and the northern tributaries should provide critical needs right through to the Murray-Darling junction, not just to Wilcannia, which is not where the Darling River finishes.” Evidence, Ms Rachel Strachan, Vice Chair, South-Western Water Users Association, 22 September 2021, p 22. (NSW Parliament 2021b).

Review of the Water Sharing Plan for the Barwon-Darling Unregulated and Alluvial Water Sources 2012, Natural Resources Commission, 2019, page 125:

“The Commission recognises that a continuous end of system flow target is not appropriate or feasible for a highly variable, unregulated system with natural cease to flow periods like the Barwon-Darling. However, to acknowledge system connectivity, a periodic end of system flow target could be implemented in the Plan. This would be consistent with global practice of catchment management, rather than tributary management, and would be in line with NSW current practice in water management in other areas such as the Shoalhaven River system.” (Natural Resources Commission, 2019).

In New South Wales Department of Planning and Environment (2022b) connectivity was discussed, and the community:

- (1) Stressed the need to amend water sharing plans to provide for downstream connectivity
- (2) Stated that connectivity between the northern and southern parts of the region and into the Murray River is very important
- (3) Suggested that trigger points are needed to ensure connectivity can be managed between water systems

Coming into dry periods, during a cease-to-flow event, and coming out of a cease-to-flow events, connectivity must be measured across the entire catchment and must include an end of catchment flow target i.e., flows reach the Murray River at Wentworth. To be extracting water while the river is disconnected is not condoned by the Darling River community as detailed in the multiple submissions made by community members over many years, and as outlined in the Natural Resources Commission (2019).

3.5 Recommended Amendments to the Barwon-Darling Water Sharing Plan

3.5.1. **Amendments must include cultural flow targets to maintain and improve spiritual, social, customary, and economic benefits of surface water to Aboriginal communities** and become an integral part of the WSP's.

- 3.5.2 **Ensure all drought reserve targets constitute “active water” and do not include “dead storage”** volumes, as “dead storage” volumes are ineffective for managing critical human and environmental needs.
- 3.5.3 **Ensure all drought reserves and cease-to-pump targets for the lower Darling are based on targets that ensure the lower Darling has accessible and manageable water for two summers or 18 months.**
- 3.5.4 **Review the 195GL target of critical drought storage at Menindee Lakes**, as per expert and local advice (Academy of Science 2019), and adjust this target to 400+GL of “active water” (‘active water’ is water stored in Lake Wetherell/Pamamaroo and water that is able to be released back into the Darling via the main weir or block dam).
- 3.5.5 **Develop end of catchment flow targets for the period prior to a critical dry period, during a critical dry period and after a critical dry period.** These end-of-catchment flow targets may be measured at Burtundy gauge, and these end-of-catchment flow targets must be met *before* temporary water restrictions are lifted.
- 3.5.6 **Recommence the process of creating a Lower Darling Water Sharing Plan**, to ensure water sharing planning regions are adequately represented in policy.
- 3.5.7 **Replace the 300 percent take rule with a rule allowing for 450 percent use over three years, as recommended by the 2019 Natural Resource Commission's**, Review of the Water Sharing Plan for the Barwon-Darling Unregulated and Alluvial Water Sources 2012.

References

- Australian Academy of Science. 2019 *Investigation of the causes of mass fish kills in the Menindee Region NSW over the summer of 2018–2019*. Australian Academy of Science.
- Bowling, L, Baker, P. 1996 Major cyanobacterial bloom in the Barwon-Darling River, Australia, in 1991, and underlying limnological conditions. *Marine and Freshwater Research*. **47**, 643. (10.1071/MF9960643)
- Brown, P, Colloff, MJ, Slattery, M, Johnson, W. 2022 An Unsustainable Level of Take: On-Farm Storages and Floodplain Water Harvesting in the Northern Murray–Darling Basin, Australia. *Australasian Journal of Water Resources*. DOI: 10.1080/13241583.2022.2042061
- Claydon, G. (2021). Independent Assessment of the Initial Assessment of the Initial Implementation of the Resumption of Low Flow Rules, IDECs and Active Management in the Barwon-Darling: 01 December 202 to 31 March 2022. https://www.industry.nsw.gov.au/_data/assets/pdf_file/0005/486617/independent-assessment-barwon-darling-resumption-of-flows-final-report.pdf
- De Groot, K. (2018). Inquiry Of Real People. Barrier Daily Truth. Broken Hill, *Barrier Daily Truth*.
- Gehrke, PC, Brown, P, Schiller, CB, Moffatt, DB, Bruce, AM. 1995 River regulation and fish communities in the Murray-Darling River system, Australia. *Regulated Rivers: Research & Management*. **11**, 363-375. (10.1002/rrr.3450110310)
- Grafton RQ, Chu L, Kingsford RT, Bino G and Williams J (2022) Resilience to hydrological droughts in the northern Murray–Darling Basin, Australia. *Philosophical Transactions of the Royal Society A* (in press).
- Hartwig, LD, Jackson, S and Osborn, N. (2020). Trends in Aboriginal water ownership in New South Wales, Australia: The continuities between colonial and neoliberal forms of dispossession. *Land Use Policy* 99.
- Jackson, S, Head, L. 2020 Australia’s mass fish kills as a crisis of modern water: Understanding hydrosocial change in the Murray-Darling Basin. *Geoforum*. **109**, 44-56. (10.1016/j.geoforum.2019.12.020)
- Kingsford RT, Bino G and Porter JL (2017) Continental impacts of water development on waterbirds, contrasting two Australian river basins: Global implications for sustainable water use. *Global Change Biology* 23: 4958–4969.
- Maloney, M, Boehringer, G, MacCarrick, G, Satija, M, Graham, M, Williams, R. 2020 2019 Citizens’ Inquiry into the Health of the Barka/Darling River and Menindee Lakes: Report and Recommendations. Brisbane, Australia: Australian Peoples' Tribunal for Community and Nature's Rights (APT).
- Mallen-Cooper, M, Zampatti, BP. 2020 Restoring the ecological integrity of a dryland river: Why low flows in the Barwon–Darling River must flow. *Ecological Management & Restoration*. **21**, 218-228. (<https://doi.org/10.1111/emr.12428>)
- NHMRC/NRMMC (2022), Australian Drinking Water Guidelines. Version 3.7 (Updated January 2022). National Health and Medical Research Council, National Resource Management Ministerial Council, Commonwealth of Australia, Canberra. <https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>
- Natural Resources Commission (2019), Review of the Water Sharing Plan for the Barwon-Darling Unregulated and Alluvial Water Sources 2012, <https://www.nrc.nsw.gov.au/Barwon-Darling%20WSP%20review%20-%20Final%20report%203MB.pdf?downloadable=1>

New South Wales (2022), New South Wales Drinking Water Database,

<https://www.health.nsw.gov.au/environment/water/Pages/drinking-water-database.aspx>

New South Wales Department of Industry (2018). Menindee Lakes Water Saving Project Fact Sheet. N.

Government. https://www.industry.nsw.gov.au/_data/assets/pdf_file/0008/327932/menindee-lakes-system-fact-sheet.pdf

New South Wales Parliament (2018). Augmentation of water supply for rural and regional New South Wales.

<https://www.parliament.nsw.gov.au/lcdocs/inquiries/2390/Augmentation%20of%20water%20supply%20for%20rural%20and%20regional%20New%20South%20Wales.pdf>

New South Wales Parliament (2021a). Rationale for, and impacts of, new dams and other water infrastructure in NSW: Part 2.

<https://www.parliament.nsw.gov.au/lcdocs/inquiries/2614/Rationale%20for%20and%20impacts%20of%20new%20dams%20and%20other%20water%20infrastructure%20in%20NSW%20-%20Part%202%20-%2027%20July%202021.pdf>

New South Wales Parliament (2021b). Report no. 1 - Select Committee - Floodplain harvesting.

<https://www.parliament.nsw.gov.au/lcdocs/inquiries/2818/Report%20no.%201%20-%20Select%20Committee%20-%20Floodplain%20harvesting%20-%20December%202021.pdf>

New South Wales Department of Planning and Environment (2022a). Local water utility performance monitoring data and reports, <https://www.industry.nsw.gov.au/water/water-utilities/lwu-performance-monitoring-data>

New South Wales Department of Planning and Environment (2022b). Draft Western Regional Water Strategy: Attachment E: Critical dry condition triggers to reduce risk to environmental and human water needs. Discussion Paper, NSW Government.

https://water.nsw.gov.au/_data/assets/pdf_file/0007/514285/critical-dry-conditions.pdf

New South Wales Department of Planning, Industry and Environment (2019). Draft water quality management plan for the Barwon-Darling Watercourse water resource plan (SW12),

https://www.industry.nsw.gov.au/_data/assets/pdf_file/0010/273754/schedule-h-barwon-darling-wqmp.pdf

New South Wales Department of Planning, Industry and Environment (2020). Regional water strategies -

Fact Sheet. https://water.dpie.nsw.gov.au/_data/assets/pdf_file/0003/501546/relationship-between-rws-and-wsp-fact-sheet.pdf

Thoms M and DeLong M (2018) Ecosystem responses to water resource developments in a large dryland river. *Water Resources Research* 54: 6643–6655.

Vertessy, R, Barma, D, Baumgartne, L, Mitrovic, S, Sheldon, F, Bond, N. (2019) Final report of the Independent Assessment of the 2018-19 fish deaths in the lower Darling: MDBA.



Floodplain Harvesting Submission

Thank you for the opportunity to make a submission on Floodplain Harvesting (FPH). I apologise for the lateness of this submission. I hope you can still consider it. It is essential for the health of the entire Murray Darling Basin that the current free-for-all is properly regulated and the regulations enforced.

Though now living in the Sydney area I have spent the last 45 years in the North West of the state. During that time I have witnessed the gradual alteration of the country with the large scale development of irrigation farming and the inexorable progression of changes due to the Climate Crisis.

Historical accounts indicate that when Europeans arrived in Australia the countryside was a network of rivers, waterholes and wetlands maintained because the water was stored in the ground where it only evaporated slowly. European style land management drained swamps, built dams, developed irrigation, and ultimately led to the countryside becoming much drier.

The multitude of plans around the Murray Darling Basin individually consider flood plains, rivers and groundwater with a seeming lack of consideration that this water is all connected. It evaporates from the ocean, it falls as rain, it soaks in to become groundwater, it runs off to become rivers, ultimately returning to the oceans. Impact one and you impact all. And climate change models predict that though rain may be heavier, droughts will be longer, deeper and more frequent.

The natural environment in western NSW is already damaged. Algal blooms have poisoned long reaches of the rivers. The Barwon Darling has never before been completely dry as it was in the recent drought causing the probable extinction of freshwater mussels in long stretches of the river. Building of dams has removed the

medium sized floods which sustained the wetlands and groundwater, and allowed native fish to disperse, so now our rivers are dominated by feral carp.

These are whole of system problems and need to be considered as such. Plans need to move away from a system-by-system, case-by-case and property-by-property process.

I acknowledge that there is a place for irrigation but it should not be allowed to continue to dominate policy development and be prioritized over the needs of the natural environment.

- There should be no entitlements above the total of 16.5GL originally proposed.
- Cultural requirements should be given priority above commercial licences
- No individual share should be more than 1ML
- This entitlement should be available and reset annually to prevent the accruing of large water balances.
- The proposal to allow up to 500% carryover should be totally rejected. It would lead to downstream droughts extending until all upstream dams fill and spill. This includes both on-farm water storage and large dams.
- There should be no trading of FPH licences. In effect the licence would be attached to the land.
- Individual FPH licences should be suspended until unapproved works are removed.
- Movement of environmental water through the system must be completely protected, as should end-of-system tributary flows.

The end result should be that much less overland flow will be intercepted leading to much better outcomes for the rivers and their associated natural environment. And cultural requirements would be met. To quote a Ngyaampah elder: "We can go down to the river, the kids can swim, we can catch a fish and take it home to feed the family."



2 July 2022

Barwon-Darling Water Sharing Plan amendments
Department of Planning and Environment—Water
209 Cobra Street, Dubbo NSW 2830

RE: Submission regarding the Draft Barwon Darling Watercourse Water Resource Plan

To whom it may concern

Thank you for the opportunity to comment on the Draft Barwon Darling Watercourse Water Resource Plan (WRP).

Our family have been landholders on the Lower Darling since the 1880's. Six generations of our family have lived on the Lower Darling and been able to rely on regular water flow to sustainably run a successful grazing enterprise. We believe this gives us a rare insight into this important part of the Darling river system.

[REDACTED]

[REDACTED] We can go through family history for 5 generations without seeing any water quality problems like we have seen in the last 17 or so years. In 2005 we had to put down a bore for stock & domestic water. Prior to this (from 1880 to 2005) there was never any need to have a bore for stock & domestic consumption as there had previously always been enough supply of good quality water for property use from the Lower Darling River.

Since 2002 we have seen around 5 extended cease to flows which cause high salinity and blue green algae issues. The blue green algae issue then renders the water unusable for our stock and domestic purposes. The most recent cease to flow was also worsened by the presence of dead and dying fish as various waterholes dried up.

The most recent incarnation of the BD WSP has seen the addition of a 195 GL storage target for water held at the Menindee Lakes, at first glance this would seem like a small improvement for Lower Darling reliability.

After further discussions with the department in Menindee it was revealed that 195 GL of "active" storage was put forward by Water NSW as an achievable outcome. 195 GL whilst sounding generous is basically 10% of capacity Menindee Lakes full level. If the 195 GL active storage was available in 1 lake (Pamamaroo) when the Lakes fell to this level it is conceivable that it could represent 12 months supply to the Lower Darling. However if the active storage was spread across the 4 lakes, total 195 active storage is not likely to last more than 3 months, especially if it is heading into summer. This conceivably could cause fish kills within 3 months of hitting the 195GL target both within the lakes and in the Lower Darling itself.

The prediction becomes even worse if the 195GL is total storage. Under this scenario it could be expected that the Lower Darling would cease to flow the moment the 195 GL was hit with very little active water available to the township of Menindee and Lower Darling. It would depend on which lake the active water was stored in, but there is no mention of where it is to be stored in the plan.

It is my opinion that a target of 18 months supply at Menindee is required to bring back some reliability and integrity to the water supply for those living south of Bourke, through to Wentworth. This is less than the original 21 months supply at Menindee as was seen in the pre

2012 plans but more than the 195GL storage proposed. The predictions I've seen for 18 months supply range between 300 to 400 GL of active supply held in Lake Pamamaroo. This must be a consideration if DPIE wish to comply with the Water Management Act.

It was also revealed the Ministers office had chosen to change the "active" storage outcome to "total" storage. This change of wording means any hope of a viable outcome for the Menindee Lakes and Lower Darling with a 195GL total storage is non-existent. A large part of 195GL total storage would be dead storage. It would mean a whole lot more cease to flows between Bourke and Wentworth and a death sentence to the Environment, Indigenous culture, tourism, grazing and many family owned businesses.

Having the ministers office intervene on such an important figure, brings back memories of 2012 when a minister interfered, to solely benefit upstream irrigators and the ministers interference was later sent to ICAC for investigation. It would seem this time the reasoning is the same, to protect low security irrigation water ahead of Town water supplies, Stock and Domestic water supplies and High Security water supplies, all of which are listed as priorities under the Water Management act. It would also reduce access to water for cultural practices of the Indigenous nations along the length of River from Bourke to Wentworth. The minister refusing to allow a target of active storage at Menindee, really can only be described as nepotism towards a few "special" irrigators in the BDWSP area.

Under the current BDWSP first flush rules only 30GL needs to pass through Bourke then pumping can commence with irrigators able to access up to 300% of their annual take. Once the 30GL has passed Bourke the door is now open to pump the Barwon Darling irrigator allocation of 195GL x 300% = 470GL plus the extra proposed FPH allocations, without any consideration to get 60GL of water to Menindee. The 60GL is a part of the MLDWSP but has no mention in the BDWSP which is the major water supply for Menindee, its absurd such oversight can be condoned. Once again nepotism towards a few irrigators, whilst hundreds of other individuals, groups, businesses, and the environment are neglected downstream of Bourke.

This will mean a very sad and slow end to our family farming operation. It will also mean a similar fate for Indigenous culture, towns, native fish species, native animals, ancient native trees and all things in the Riverine Environment that rely on fresh regular flows

The Barwon-Darling Water Sharing Plan should include provision to get water to the Murray Junction, under the first flush rule. By only attempting to get some small flows to Willcanda before extractions resume is insanity from DPIE. It really leads me to ask just how much consideration is being given to Towns, Stock and Domestic, Cultural, High Security Water Licences, Wildlife, Fish and the Riverine environment downstream of the Barwon-Darling WSP. Your current proposal suggest that no consideration is given.

Finally, these documents are called Water Sharing Plans, it seems some departmental staff maybe overlooking the word "Sharing" and just putting together Water Plans, with no thought to connectivity between Valleys!

Regards

[Redacted signature block]



FW: Submission for the proposed amendments to the Barwon Darling unregulated water sharing plan

Lands-Water FloodPlain Harvesting Mailbox <floodplain.harvesting@dpi.nsw.gov.au>

Mon 11/07/2022 9:54 AM



📎 1 attachments (18 KB)

Submission to draft ammendments to BD water sharing plan July 2022.docx;



From: digital.services=squiz.dpie.nsw.gov.au@squiz.regional.nsw.gov.au
 <digital.services=squiz.dpie.nsw.gov.au@squiz.regional.nsw.gov.au> **On Behalf Of**
digital.services@squiz.dpie.nsw.gov.au
Sent: Tuesday, 5 July 2022 5:55 PM
To: DPIE Barwon Darling Unregulated WSP Mailbox <barwondarlingunreg.wsp@dpi.nsw.gov.au>
Subject: Submission for the proposed amendments to the Barwon Darling unregulated water sharing plan

Permission

I would like my personal details and identifying information to be treated as confidential? No

Your details

Name: Mervyn John Gordon
Postal address: [Redacted] Tamworth, NSW, 2340
Telephone: [Redacted]
Email address: [Redacted]

Submission details

Who are you representing? Myself (individual)



If an Organisation,
please specify:

Which stakeholder
group best describes
you?: Irrigation

If Other state
government or other
stakeholder group not
mentioned above,
please specify:

Do you undertake
floodplain harvesting?: No

Where are you
located?: Northern inland

If Other, please specify:

If you are a water user
in the Barwon-Darling
Unregulated River
Water Source, what
management zone are
you located in?: Culgoa River Junction to Bourke

Have you attended a
webinar or face-to-face
meeting as part of this
consultation?: Public face-to-face session

Section A: General amendments

1. Do you support the
proposed rules for
temporary trade of
individual daily
extraction components
(IDECs) within river
sections?: No

1.1. Please provide a
reason for your
support/opposition.:

Given the now well published negative impacts IDEC's have had on the Barwon-Darling Valley, I am adamant the direction now tabled by the department will impose further cost on small licence holders (like myself), and benefit those with large share components. As visible in my IDEC submission to NSW Water late last year, I tabled the example how pump flow rate and small IDEC volume combined to restrict my current B class water access licence on West Mooculta. My IDEC was exceeded as soon as the river flowed at a rate higher than 6 metres on the Bourke gauge. For example, on the 8th of May 2021, the 400 mm licensed pump on West Mooculta was metering 34 megalites per day, however my IDEC for that licenced work was 24.7 megalitres. This 30% difference in pump capacity verses IDEC created the environment where I had to decide not to grow and/or irrigate a crop, as I would have been in breach of my licence conditions. In essence, IDEC water policy had now restricted my business operation to

2. Do you support the
proposed rule to allow
access announcements
to be amended within
24 hours – for example,
when there is more
water in the river than
forecast due to
unforeseen Yes



circumstances such as local rainfall events?:

2.1. Please provide a reason for your support/opposition.:

3. Do you support the proposed changes to allow flow data forecast at both reference gauges to be used to make flow class announcements when one of those gauges is not working?:

3.1. Please provide a reason for your support/opposition.:

4. Do you support the proposed wording changes to clarify how the cumulative flow trigger that relaxes the resumption of flows rule works?:

4.1. Please provide a reason for your support/opposition.:

5. Do you have any general comments on the proposed changes plan?:

Section B: Floodplain harvesting amendments

1. Do you support the proposed account management rule of an account limit of 5 ML per unit share? No

1.1. Please provide a reason for your support/opposition.:

2. Do you support the proposed initial available determination of 1 ML per unit share? No

2.1 Please provide a reason for your support/opposition.:

3. Do you support the proposed ongoing available water determination of 1 ML per unit share? No

3.1. Please provide a reason for your





support/opposition.:

4. Do you support the proposed trade rules?: No

4.1. Please provide a reason for your support/opposition.:

5. Do you support the proposed rules for the granting or amending of water supply works nominated by a floodplain harvesting (unregulated river) access licence?: No

5.1. Please a reason for your support/opposition.:

6. Do you support the proposed access rule for resumption of flows to be applied to floodplain harvesting (unregulated river) access licences?: No

6.1. Please provide a reason for your support/opposition.:

7. Do you support the proposed access rule to restrict take under floodplain harvesting (unregulated river) access licences when there is less than 195 GL in the Menindee Lakes system until a continuous flow volume of at least 4,000 ML is forecast to occur in the Darling River at the Wilcannia gauge?: No

7.1. Please provide a reason for your support/opposition.:

8. Do you support the proposed amendment provisions?: No

8.1. Please provide a reason for your support/opposition.: It is my considered opinion, that floodplain harvesting licensing needs to be off the table until the Barwon-Darling model is recalibrated with up-to-date metering data. I understand, and accept, that some data has been collected from the 2020 flow event, and that the total diversion limit remains unchanged, however, I believe the licencing volumes need to be made public, and robustly backed up by policy planners, in order to avoid the pubic prosecutions as witnessed with the creation of the 2012 Water Sharing Plan. In publishing the fact, some 20,000 megalitres are to be issued in NEW licensing on Barwon-Darling Floodplain, the perfect storm will be

created amongst a river community whose memory of a dying river in 2019 is very raw. The very fact that 100,000 megs can be extracted in a single water year needs to be explained further in an open public forum. I for one, was encouraged to believe by policy creators, that the water recovered under the Barwon-Darling Cap management Strateg

Additional attachments

If you want to provide additional feedback you can attach your documents here:

Submission to draft ammendments to BD water sharing plan July 2022.docx, type application/vnd.openxmlformats-officedocument.wordprocessingml.document, 17.3 KB

5th July 2022

Submission on Proposed Amendments to the Barwon-Darling Unregulated Water Sharing Plan

Submission by Mervyn John Gordon- Barwon-darling Water Access Licence Holder

1.1 Proposed Change to Allow Temporary Trade of IDEC's

Given the now well published negative impacts IDEC's have had on the Barwon-Darling Valley, I am adamant the direction now tabled by the department will impose further cost on small licence holders (like myself), and benefit those with large share components.

As visible in my IDEC submission to NSW Water late last year, I tabled the example how pump flow rate and small IDEC volume combined to restrict my current B class water access licence on West Mooculta. My IDEC was exceeded as soon as the river flowed at a rate higher than 6 metres on the Bourke gauge. For example, on the 8th of May 2021, the 400 mm licensed pump on West Mooculta was metering 34 megalites per day, however my IDEC for that licenced work was 24.7 megalitres.

This 30% difference in pump capacity verses IDEC created the environment where I had to decide not to grow and/or irrigate a crop, as I would have been in breach of my licence conditions. In essence, IDEC water policy had now restricted my business operation to the point I could not make sensible and profitable cropping choices, backed with sound irrigation practices. I consider it extremely unfair that the Departments answer to this problem, is imposing a further cost on the impacted licence holder by asking them to approach the open water market, to purchase IDEC shares, for a value that is unknown before the trading mechanism is introduced. If the problem of an insufficient IDEC is already killing business income, where does the department think the revenue will come from for small licence holders to purchase more IDEC Shares?

As with all policy change on the Barwon-Darling, there is lived experience that no financial safety-net is put into place before these trading options are written into law. As witnessed with the Clause 42 amendment impacts, what compensation mechanism does the NSW Water minister, and his water department, have in place to protect those licence holders impacted by IDEC policy, even before the temporary trading amendment is accepted in law?

2.1 Floodplain Harvesting Provisions

It is my considered opinion, that floodplain harvesting licensing needs to be off the table until the Barwon-Darling model is recalibrated with up-to-date metering data. I understand, and accept, that some data has been collected from the 2020 flow event, and that the total diversion limit remains unchanged, however, I believe the licencing volumes need to be made public, and robustly backed up by policy planners, in order to avoid the pubic prosecutions as witnessed with the creation of the 2012 Water Sharing Plan.

In publishing the fact, some 20,000 megalitres are to be issued in NEW licensing on Barwon-Darling Floodplain, the perfect storm will be created amongst a river community whose memory of a dying river in 2019 is very raw. The very fact that 100,000 megs can be extracted in a single water year needs to be explained further in an open public forum. I for one, was encouraged to believe by policy creators, that the water recovered under the Barwon-Darling Cap management Strategy in 2006 had no room left for one megalitre, let alone twenty thousand FPH Cap shares.

3.1 Other Planned Changes-New Rule to Trade Water Account

I have made many representations outlining the impacts that the original amendment of clause 42 had on my business, and my businesses survival in the Bourke community. After enduring 6 years without Barwon-Darling trade policy frameworks after the 2006 Cap Management Strategy was introduced, I have had to suffer under the unnecessary weight of unpublished water policy amendments in 2018. The lack of policy thought, and its continued failed attempts to correct its severe impacts, has created the perfect example of poor water policy governance, and its impact on Barwon-Darling licence holders.

The very fact, no DPIE-Water policy planning staff at the Bourke community consultation meeting in Bourke, 30th of June 2022, could explain why the original amendment occurred in 2018, and what problem it was fixing, spoke volumes of the neglect to this issue. Alarming, there were two DPIE-Water personnel attending that meeting that actually developed and introduced the original 2012 Barwon-Darling water Sharing Plan. Neither made comment.

Unfortunately, the changes made in the *DRAFT* policy documents presented at the Bourke community consultation meeting, contained a number of errors in regard to my water license. When these errors were brought to the attention of Water NSW staff, I was promptly advised that the *DRAFT* document was in-fact only minutes away from being signed off on by the Environment Minister.

It is my firm belief that this issue needs to be reverted back to the original interim trading rules for the Barwon-Darling. The very same policy rules that were accepted in the creation of the 2012 Barwon-Darling Water Sharing Plan, and practices successfully up until the 2018 amendment was enforced.

The Productivity Commission Inquiry Report into National Water Reform (No.96, May 2021) made it known very clearly that, "Markets provide short-term access to water, enhancing water users' capacity to manage through drought and weather shocks". This is the very marketing strategy my family was not afforded in 2018, when the NSW Water Minister saw fit, to introduce NEW water policy that not only restricted the water market in my river section, but the amount I could trade.

I will be making separate representation to DPIE-Water policy planners in conjunction with this submission on the Clause 42 issue.

Yours sincerely,

Mervyn John Gordon

Submission Guide: Barwon-Darling Floodplain Harvesting (FPH) Rules

Deadline: Friday 8 July 2022

Email: floodplain.harvesting@dpi.nsw.gov.au

Documents available at: <https://www.industry.nsw.gov.au/water/plans-programs/healthy-floodplains-project/water-sharing-plan-rules/barwon-darling>

Background

The Barwon-Darling River was identified by the Natural Resources Commission as suffering ecological collapse during recent intense drought conditions. The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL (gigalitre = 1 billion litres) to FPH extraction. This volume was used in the development of the Murray-Darling Basin Plan. The proposed new entitlements are above this volume. Extraction from the Barwon-Darling has breached the Basin Plan Sustainable Diversion Limit in 2019 and 2020. The proposed management of FPH in the Barwon-Darling must not lock in individual property history of use.

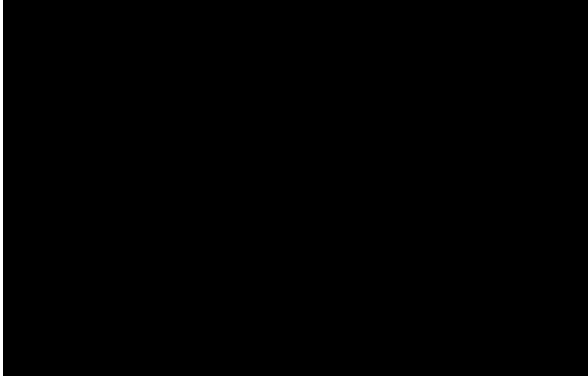
Key Submission Points (use your own words & additional points)

- 1. VOLUME:** The volume of FPH to be licensed is estimated to be 51.32 GL (or unit shares), as identified in the Community Assistance Report. This differs greatly from the figures used in the modelled scenarios. There is no confidence in the information provided for FPH assessment or proposed entitlement in the Barwon-Darling River.
 - Do not support that new FPH licenses will keep extraction below the Plan Limit
 - Do not support the rainfall runoff exemption – this is free water that must be accounted for
- 2. ACCOUNTING RULES:**
 - Do not support 500% carryover – will cause loss of key flood flows for downstream benefits to wetlands, cultural values, groundwater recharge, basic rights, and town water supply.
 - Support annual accounting with no carryover – there is no rationale for this causing larger entitlements other than faulty policy favoring history of use
 - Support that initial allocation is 1 ML unit share or less depending on antecedent conditions
 - Support that annual allocation is 1 ML unit share or less, as above
- 3. TRADING:**
 - Do not support any trading of FPH entitlement – it is likely to cause environmental and cultural damage – this fails to meet the requirements of trading rules
- 4. FLOODPLAIN WORKS**
 - No works in Floodplain Management Plan Zone A and D should be licensed to take FPH
 - No lagoons or natural drought refugia should be licensed to take FPH
 - No FPH works licenses should be granted until all unapproved and floodplain ‘hotspot’ works are removed or modified.
- 5. ACCESS RULES**
 - Support no access under resumption of flow rules – these must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi, Macquarie

- Strongly object to no FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia. This offers no drought protection and will cause ecological damage. A target of 450 GL in Menindee is needed with higher forecast upstream flows.
6. **PROTECTION OF ENVIRONMENTAL WATER:** Rules must protect held environmental water inflows from Queensland and NSW northern tributaries.
 7. **AMENDMENTS:** Support strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation

Contact: [REDACTED] for more information

Please include name, address and contact details. Identify if you want your submission published or if you want anonymous publication.



8 July 2022

floodplain.harvesting@dpi.nsw.gov.au

NSW Department of Planning and Environment - Water

**Floodplain harvesting: proposed
changes to Barwon-Darling Water Sharing Plan**

Dear Mr Bentley and departmental officers,

The [REDACTED] is a community organisation with a long history of standing up for nature – advocating for conservation in national parks, nature reserves, other public reserves, and private lands and advocating for ecologically sustainable management of catchments, rivers, floodplains and oceans. The Armidale Branch of [REDACTED] takes a particular interest in issues affecting nature and ecological sustainability in the northern tablelands, northwest slopes and floodplains of NSW to our west. Armidale [REDACTED] membership is drawn from this wider region, including members on living on lands in the Border Rivers, Gwydir and Namoi catchments from which runoff flows towards the Barwon and Darling/Baaka Rivers.

We have long been concerned by the environmental impacts of unconstrained growth in floodplain harvesting and are therefore pleased that the NSW government intends to regulate this practice. Implementation of the mid-1990s decision to cap diversions from all Murray Darling Basin rivers should have included regulating and constraining floodplain harvesting. We supported introduction of the Murray Darling Basin Plan and were pleased that the NSW Government is a party to this agreement, however the purchase of water for the environment under that plan cannot alone achieve its objectives, particularly when floodplain harvesting has continued to grow and not be limited to times when most environmental needs have been met. We do not accept that the recent actions or current proposals to limit floodplain harvesting from along the Barwon-Darling or in its catchment.

The approach proposed will not meet environmental or cultural needs in the Barwon-Darling, including its wetlands and floodplain, nor the needs of the people of western NSW who value the health and flow in this riverine system for their social and economic needs. Nor will it enable similar needs in the lower Darling/Baaka region to be met.

We suggest that whether or not proposed rules enable meeting of the environmental water requirements set out in the [Barwon-Darling Long Term Water Plan](#) and the equivalent plan for the Lower Darling should be the principle considerations in determining what rules are adopted. Meeting any basic rights needs or cultural needs that are not covered by meeting environmental water needs should be the next priority. Water use by all other categories of access licence holders with higher legal priority than floodplain harvesters will need to be considered. These priorities should be clearly reflected by linking access rules to a procedure for ensuring that environmental water requirements and other priority needs are met. Floodplain harvesters have given themselves priority for many decades. It should not be their turn to have 3rd priority.

Modelling of how these environmental water requirements can be met in the future, with likely climate-changed runoff and river flows, minus licensed extraction from river channels, should determine the amounts likely to be left in a long run of years that could realistically be harvested, recognising that the ability of floodplains and some wetlands to receive their required flows are hampered or prevented by inappropriately located harvesting works that should be greatly altered if not removed. Rainfall runoff from irrigated land should be included in the modelled flows along with other runoff

In the case of Barwon-Darling floodplain harvesting access licences, the volume that could be shared should be much less than the 16.5 GL that the 2012 Barwon-Darling Water Sharing Plan attributed to floodplain harvesting. It should be no-where near the 51.32 GL of shares referred to in the Community Assistance report.

Accounting rules

Annual allocations should reflect the condition of the river, what environmental and other priority water requirements will need to be met partly from local sources with water that could potentially be harvested, and the need to constrain use in the event that the Sustainable Diversion Limit or another applicable limit has been breached. If a flow event that meets all environmental water requirements occurs during the year, the allocation could be lifted having regard to this and the need to keep within SDL.

We do not support the proposal to allow carryover because it is likely to have serious environmental consequences. Fish and all the environmental assets delineated in the Barwon-Darling Floodplain Management Plan have to wait for whatever flow opportunities the weather systems bring and make the most of them, with very little water banked up in dams for future environmental use. Floodplain harvesters should only be able to carry over what they have actually physically stored already, not have carryover in a theoretical account.

Times when diversion of close to 500% could occur under the proposed rules, that are not based on enabling environmental priorities to be met, are likely to be when many licensees have had empty storages for some time and the river may have had only small flows. Headwater storage levels may also be low. The cumulative impact of Barwon-Darling FPH with upstream FPH and dams will be substantial and must not be ignored by a piecemeal approach to the issue. This is likely to effectively extend droughts experienced by Darling-Baaka ecosystems and by Barkandji and other people, impairing the river's ecological, cultural, social and economic values. This has the potential to result in the Darling-Baaka experiencing two successive droughts as one artificially extended drought without a period of flood flows between the two that would naturally occur and enable partial recovery by the Darling-Baaka's ecosystems and people.

All rainfall runoff within irrigated properties should be accounted for and all except the 10% 'harvestable right' should be subject to usage charges.

Trading

Trading of FPH licences should not be permitted because this is likely to involve movement to locations with additional flows either upstream to capture inflows before the environment can absorb its share or to capture flows from warrambools or other floodplain creeks. This has already happened in some reaches. After trading of other access licences was permitted, all of the licences that used to be in and north of Walgett weirpool were moved to near Mungindi resulting in less flow in all of the intervening reach of the Barwon, at the expense of the ecosystems in that reach. This adversely affects the riverine ecosystems in Barwon Nature Reserve and State Conservation Areas including big old river redgums that now have less access to water in normal to dry seasons and the flora and fauna of small wetlands that may be connected to the river for less time than they used to be. Upstream movement of more

licences in other reaches, or movement into any other locations with greater ease of access to local or overbank flows, should not be possible and would be contrary to the *Basin Plan* trading objectives and principles which preclude trading where the environment would be harmed.

Floodplain works

Many of the existing harvesting works are in areas through-which flows and fish need to be able to move freely to reach environmental assets. Some may causing inundation of areas that should not be flood-labile.

Before any access licences are granted, all unapproved works should be removed or greatly modified so that they do not impede flows and cannot be used for floodplain harvesting. Works in hotspot areas should be reviewed so that works that should not have been approved are also removed or modified. This should occur before access licences are granted so that people who did not obtain approval do not benefit further and so that shares can be fairly issued to those who did seek and obtain approval.

No harvesting works in Floodplain Management Plan Zone A or D should be licensed. No harvesting should be permitted from natural drought refuges or lagoons or areas that may naturally be habitats for threatened species.

Access rules

As indicated above █████ considers that access rules should be based on meeting environmental needs. The proposed rules do so to only an exceedingly limited and quite inadequate extent.

We support the concepts of protecting the first big flows flows after the Barwon-Darling has been in drought or when there is a drought in its catchment but the proposed rules will not achieve even this. The pretension that this, or flushing of the river, will be achieved by the one access rule proposed for the Barwon Darling and the single rules proposed for FPH in the tributaries is quite unbelievable. Using the presence of less than 195 GL in Menindee Lakes (below 11%) as a surrogate for when the Barwon Darling needs access to water that might otherwise be harvested is woefully inadequate.

We strongly object to any harvesting occurring when the lakes are below 195 GL and share the view that 450 GL would be a more appropriate target. It would be better to limit harvesting to ensure that 4000 ML will reach Wilcannia from every event from which harvesting is permitted after that 450 GL target is reached until the lakes are full or drop below 450 again when harvesting should cease.

Far more than 4000 ML should be when Menindee lakes are low because the flows will be needed later in the Lower Darling and many environmental water needs between Bourke and Menindee will not be met by a single event of this size – there being no guarantee of other events for a year or longer.

The rules would work in concert with rules for access to supplementary water and restrictions on other access licences when necessary but the floodplain harvesting licences should have the lowest priority and contribute far more to meeting a diverse range of downstream needs.

The proposed flow rates into the Barwon required to allow harvesting from the Border Rivers, Gwydir, Namoi or Macquarie when there are storm flows during or after a drought should be raised much higher and relate to human and ecological needs in the Darling, not just event volume at the end of these upstream systems. The proposal to allow harvesting in the Namoi catchment when Menindee Lakes are below 195 GL if just 300 ML will reach Walgett suggests that the Minister favours irrigators in his own valley, the Namoi, by proposing such a low target. However the other valley end of systems flows at a

time when Menindee Lakes are below 11 % are also woefully inadequate. The whole set shows shows appalling disrespect for the people and environment downstream.

Active Management of environmental water

Held environmental water from Queensland and NSW should be protected to flow as far as it naturally can. Difficulties in modelling this should not limit sensible practical management of water that has been purchased at public expense as is intended to be used by the environment downstream. The Water Sharing Plan should be altered to the extent that is needed to ensure all environmental water is protected from pumping or from diversion by floodplain harvesters. It should be possible to piggyback HEW on natural flows and get it to its intended destinations even if these are on the floodplain.

Amendments

We Support strong amendment provisions for all FPH management rules to enable rule changes without triggering compensation.

Thank you for considering these points.

██████████

██████████████████

██████████████████████████████

Proposed amendment of the Barwon-Darling water sharing plan, including proposed rules for floodplain harvesting

Submission form

Office use only		Submission number	
-----------------	--	-------------------	--

How to fill out this form

Section A – General amendments

In section A, the department is seeking stakeholder views on amending the *Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012*.

A supporting factsheet (*Proposed amendments to the Barwon Darling unregulated water sharing plan*) provides an overview of the proposed changes. The fact sheet is available on the department's website at dpie.nsw.gov.au/barwon-darling-wsp.

Section B – Floodplain harvesting amendments

In section B, the department is seeking feedback on rules for floodplain harvesting access licences in the Barwon-Darling.

A report to assist community consultation (*Barwon – Darling: Floodplain harvesting in water sharing plans*) provides information on the proposed rules for floodplain harvesting and explains the interaction between those rules, modelling and anticipated downstream outcomes once implemented.

More information on the proposed water sharing plan amendments and on floodplain harvesting rules in the Barwon-Darling is available via the [Water Management in Far West NSW webpage](#).

Complete online or send this completed submission form to:

Post: Barwon-Darling Water Sharing Plan amendments
Department of Planning and Environment Water
209 Cobra St, Dubbo NSW 2830

Email: barwondarlingunreg.wsp@dpie.nsw.gov.au

If you complete your submission online, we will send a copy of your submission to your email address after you have submitted the form.

Note: Submissions close midnight Friday 8 July 2022

Information on privacy and confidentiality

All submissions received by NSW Department of Planning and Environment will be reviewed and published. The department values your input and accepts that information you provide may be private and personal.

If you would prefer your personal details and identifying information, to be treated as confidential, please tick the relevant box below.

If you don't request that your personal details be treated as confidential, when publishing your submission the department will include your name and any personal details you provide.

Please note that, regardless of a request for confidentiality, the department may be required by law to release copies of submissions to third parties in accordance with the *Government Information (Public Access) Act 2009*.

Personal details	
I would like my name and personal details to be treated as confidential.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Name	
Postal Address	
Telephone	
Email address	

Submission details		
Who are you representing?	<input type="checkbox"/> Myself (individual) <input type="checkbox"/> An organisation (<i>name</i>):	
Which stakeholder group best describes you? (Please tick one box)	<input type="checkbox"/> Community member <input type="checkbox"/> Irrigation <input type="checkbox"/> First Nations <input type="checkbox"/> Environment <input type="checkbox"/> Fishing <input type="checkbox"/> Local landholder	<input type="checkbox"/> Local Govt./ Utilities <input type="checkbox"/> NSW Government <input type="checkbox"/> Other State Government (specify): <input type="checkbox"/> Commonwealth <input type="checkbox"/> Other (specify):

Submission details		
Do you undertake floodplain harvesting	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Where are you located?	<input type="checkbox"/> Northern inland <input type="checkbox"/> Southern inland	<input type="checkbox"/> Coastal <input type="checkbox"/> Other (please specify)
If you are a water user in the Barwon-Darling Unregulated River Water Source, what management zone are you located in?	<input type="checkbox"/> Mungindi to Boomi River Confluence <input type="checkbox"/> Boomi River Confluence to Upstream Mogil Mogil Weir Pool <input type="checkbox"/> Mogil Mogil Weir Pool <input type="checkbox"/> Downstream Mogil Mogil to Collarenebri <input type="checkbox"/> Collarenebri to Upstream Walgett Weir Pool <input type="checkbox"/> Walgett Weir Pool <input type="checkbox"/> Downstream Walgett to Boorooma	<input type="checkbox"/> Boorooma to Brewarrina <input type="checkbox"/> Brewarrina to Culgoa River Junction <input type="checkbox"/> Culgoa River Junction to Bourke <input type="checkbox"/> Bourke to Louth <input type="checkbox"/> Louth to Tilpa <input type="checkbox"/> Tilpa to Wilcannia <input type="checkbox"/> Wilcannia to Upstream Lake Wetherell
Have you attended a webinar or face-to-face meeting as part of this consultation?	<input type="checkbox"/> Public webinar <input type="checkbox"/> Public face-to-face session	<input type="checkbox"/> One-on-one or industry meeting <input type="checkbox"/> none of these

Proposed changes to the Barwon-Darling water sharing plan

A number of changes have been proposed for the amended 2022 plan. Key drivers for the proposed changes include:

- implementation of the NSW Floodplain Harvesting Policy
- the Natural Resources Commission's review recommendations
- contemporary water resource policy – some changes to the plan include alignment with current policy to help improve efficiency and consistency in achieving water resource management objectives across the state
- reviews of the operation of active management and the resumption of flows (first flush) rule
- updated data and knowledge improvements.

Changes are proposed to:

- include floodplain harvesting provisions to enable licensing and regulation of floodplain harvesting in the plan area
- establish rules for temporary trade of Individual Daily Extraction Components (IDECs) within river sections
- allow access announcements to be amended within 24 hours - for example, when there is more water in the river than forecast due to unforeseen circumstances like local rainfall events
- allow forecast flow data at both reference gauges to be used to make flow class announcements when one of those gauges is not working
- clarify the operation of the cumulative flow trigger that relaxes the resumption of flows rule
- remove redundant clauses and notes, update superseded contact information and update standard clause wording to be consistent with recent changes to other water sharing plans.

Section A: General amendments

You may respond to any (or all) of the questions in Section A.

A1 – Do you support the proposed rules for temporary trade of Individual Daily Extraction Components (IDECs) within river sections as proposed?

Yes No

A1.1 – Please provide a reason for your support/opposition.

Reason:

A2 – Do you support the proposed rule to allow access announcements to be amended within 24 hours – for example, when there is more water in the river than forecast due to unforeseen circumstances like local rainfall events?

Yes No

A2.1 – Please provide a reason for your support/opposition.

Reason:

A3 – Do you support the proposed changes to allow forecast flow data at both reference gauges to be used to make flow class announcements when one of those gauges is not working?

Yes No

A3.1 – Please provide a reason for your support/opposition.

Reason:

A4 – Do you support the proposed wording changes to clarify how the cumulative flow trigger that relaxes the resumption of flows rule works?

Yes

No

A4.1 – Please provide a reason for your support/opposition.

Reason:

A5 – Do you have any general comments on the proposed changes to the plan? (See Section B if you have comments about the proposed rules for Floodplain Harvesting)

General comments

Thank you. Please add additional pages if required.

Section B – Floodplain harvesting amendments

These questions relate only to floodplain harvesting.

You may respond to any (or all) of the questions in Section B.

B1 – Do you support the proposed account management rule of an account limit of 5 ML per unit share?

Yes No

B1.1 – Please provide a reason for your support/opposition.

Reason:

B2 – Do you support the proposed initial available determination of 1 ML per unit share?

Yes No

B2.1 – Please provide a reason for your support/opposition.

Reason:

B3 – Do you support the proposed ongoing available water determination of 1 ML per unit share?

Yes No

B3.1 – Please provide a reason for your support/opposition.

Reason:

B4 – Do you support the proposed trade rules?

Yes No

B4.1 – Please provide a reason for your support/opposition.

Reason:

B5 – Do you support the proposed rules for the granting or amending of water supply works nominated by a floodplain harvesting (unregulated river) access licence?

Yes No

B5.1 – Please a reason for your support/opposition.

Reason:

B6 – Do you support the proposed access rule for resumption of flows to be applied to floodplain harvesting (unregulated river) access licences?

Yes No

B6.1 – Please provide a reason for your support/opposition.

Reason:

B7 – Do you support the proposed access rule to restrict take under floodplain harvesting (unregulated river) access licences when there is less than 195 GL in the Menindee Lakes system until a continuous flow volume of at least 4,000 ML is forecast to occur in the Darling River at the Wilcannia gauge?

Yes No

B7.1 – Please provide a reason for your support/opposition.

Reason:

B8 – Do you support the proposed amendment provisions?

Yes No

B8.1 – Please provide a reason for your support/opposition.

Reason:

Thank you. Please add additional pages if required.

[REDACTED]

[REDACTED]

NSW Healthy Floodplains Project,
c/o Department of Planning, Industry and Environment,
Locked Bag 5022,
PARRAMATTA NSW 2150

To whom it may concern,

BARWON DARLING WATER SHARING RULES FOR FLOODPLAIN HARVESTING

I am writing on behalf of [REDACTED] to provide a submission on the draft floodplain harvesting amendments to the Barwon-Darling Water Sharing Plan. While [REDACTED] has a long history of voicing concerns about the sustainability of floodplain harvesting, we also recognise that this practice is an integral part of irrigated agriculture in the northern Basin, and we support your efforts to regulate, measure and limit floodplain harvesting. All forms of water take should be regulated, and overall levels of take must be within sustainable and legal levels.

Many Victorian water users and communities remain concerned with the practice of floodplain harvesting in NSW, and there is a lack of confidence that the proposed licensing policy will lead to better outcomes. These concerns about floodplain harvesting are voiced by irrigators, local governments and Traditional Owners. Stakeholders consider that allowing floodplain harvesting to continue will reduce inflows to the Southern Basin and the Menindee Lakes, leading to negative social, economic, environmental and cultural impacts for communities. Lack of trust in governments in general, as well as of the technical information supporting this policy will continue to impact confidence in Basin water management. It is important that trust continues to be built across the Basin.

Further evidence and more detail on the rationale and assumptions behind the proposed rules will help [REDACTED] and others downstream of the Barwon-Darling catchment to better understand this process to licence floodplain harvesting. Documenting how the proposed rules will protect downstream communities and environments from any impacts of floodplain harvesting will give stakeholders confidence that effective compliance and enforcement frameworks are in place.

[REDACTED] also would like to be assured that NSW's water take is and will remain in line with the legal sustainable diversion limits (SDLs) set by the Murray-Darling Basin Plan. Water Resource Plans will be used to report against SDL's in the future and documented assurance will be helpful for stakeholders in the short term. [REDACTED] would appreciate additional information on how floodplain harvesting will be managed in line with sustainable diversion limits (SDLs) without accredited WRPs.

I hope that NSW is successful in regulating floodplain harvesting as it is important that all states have sound water management frameworks underpinned by rigorous compliance systems for all types of take.

If you would like more information about these matters, please contact

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

13/07/2022



[Redacted text]

[Redacted text]

[Barwon-Darling floodplain harvesting submission.](#)

[Introduction](#)

Thank you for the opportunity to make a submission although we seem to find ourselves in this position regularly, which should be a red flag to indicate there is something drastically wrong with the floodplain harvesting licensing process.

[Redacted] are a peak irrigation advocacy group representing 2,200 landholdings in [Redacted]

The southern riverina region contributes around \$24 billion annually to the Australian economy through agricultural production such as rice, wheat, corn, dairy, beef, fruit, nuts, wine and cotton, directly supporting thousands of jobs, regional communities, and the environment.

In addition to the direct economic benefit, there are substantial value adding industries, such as food manufacture, processing plants, and abattoirs.

The viability of our entire region, our communities, our business and our environment is directly reliant on reliability of water.

It underpins the nations economy and protects our staple food production in a problematic and unsettled global climate.

Licensing of floodplain harvesting across all NSW valleys must be sustainable and while we support licensing, it must be at the legislated legal limit and not some distorted volume that contravenes the very legislation put in place to protect the Murray-Darling Basin.

Floodplain harvesting

Despite the 1995 agreement by Governments to implement the Murray-Darling Basin Cap, and subsequent other intergovernmental commitments, such as the National Water Initiative and the Basin Plan, floodplain harvesting has been allowed to grow unabated in NSW.

The ability to extract water via floodplain harvesting is strongly correlated to on-farm storage capacity. ■ commissioned a satellite imaging project showing on-farm storages in the five northern NSW valleys have grown from 600 GL in 1994 to over 1,400 GL today.

It is a hydrological reality that increased extraction upstream reduces flows downstream.

NSW and Victoria share a commitment under the Murray-Darling Basin Agreement to deliver 1,850 GL to South Australia annually, except in very dry years. The Murray-Darling Basin Commission undertook research in 2000, stating the northern Basin contributed an annual average of 39 per cent of the South Australian entitlement. The Murray-Darling Basin Authority reported this statistic in its preparation of the Basin Plan.

This century, the northern basin has only contributed to the South Australian entitlement five years out of 21.

This impacts Murray General Security users by:

- a declining contribution from the Northern Basin means the NSW obligation to South Australia is met out of the Murray river, and
- increased conveyance losses in the Murray, as the South Australian entitlement is delivered from Hume Dam, rather than Menindee Lakes.

The average annual allocation to Murray General Security has dropped from 84 per cent to 52 per cent over the last two decades.

The NSW and Commonwealth Governments claim inflows into the Murray system have halved this century and impacts of floodplain harvesting on the Murray system are negligible.

The Governments attribute the decline in inflows to climate change which makes proposed volumes above Cap even more ridiculous.

Proposed FPH licence volumes will exceed legal limits

The NSW Department of Planning, Industry and Environment (**DPIE**) propose to issue approximately 346GL of floodplain harvesting licences. The proposed volumes and accounting rules for floodplain harvesting, will exceed the legal limits in the:

1. *Water Act 2007* (Cth); and
2. *Basin Plan 2012* (Cth).

FPH will exceed legal limits in the *Water Act 2007*

In 1995, governments agreed to limit extractions to the 1994 level of development including infrastructure (such as on-farm storages) and rules. This is the Murray Darling Basin Cap (the **Cap**) and is defined in the *Water Act 2007* (Cth) at Schedule 1 (the Murray Darling Basin Agreement). NSW are legally bound to ensure total extractions are lower than the Cap or the limits set in the water sharing plans.

The proposed volumes and accounting rules for floodplain harvesting will require a commensurate reduction of other forms of take for NSW to remain within the Cap limits mandated by the *Water Act 2007* (Cth) and *Water Management Act 2000* (NSW).

FPH licences will exceed legal limits in the *Basin Plan 2012*

The limits for water extractions under the *Basin Plan 2012* (Cth) are calculated by the baseline diversion limit less water recovery. The total amount of floodplain harvesting in the baseline diversion limits for the Northern NSW valleys is 46 GL.

The proposed volumes and accounting rules for floodplain harvesting will require a commensurate reduction of other forms of take for NSW to remain within the Basin Plan limit.

Barwon-Darling Floodplain Harvesting (FPH) Rules

The 2012 Barwon-Darling Water Sharing Plan attributed 16.5 GL to FPH extraction and was used in the development of the Murray-Darling Basin Plan. The proposed new entitlements exceed this volume and have breached the Basin Plan Sustainable Diversion Limit in 2019 and 2020. The volume of FPH to be licensed is estimated to be 51.32 GL as identified in the Community Assistance Report. This differs greatly from the figures used in the modelled scenarios. Every other southern basin irrigator is licensed and metered and operates within the Cap, why is the Barwon-Darling offered different treatment and special numbers? Historical use should not form the basis of the licensed volume when the historical use is illegal. No other licensed and metered irrigator in the southern basin can access an annual carryover of their licensed volume so why should the Barwon-Darling?

1. A 500 per cent carryover will result in a reduction of downstream flows impacting environmental assets, the community and town water supply.
2. This is an unregulated system and with no end of system flows targets proposed to protect connectivity there should be no carryover. A key principle of the basin plan is a connected river system and anything proposed that prevents this from happening goes against the whole premise of the plan.
3. As an unregulated system reliant on storage and storage capacities, licenses must stay with the property and not be tradable on the open market. Our concern

remains other works won't be de-commissioned and there is no system in place to remove them which will ultimately lead to an increase in FPH take.

4. Based on the unreliable nature of licensing FPH must not be compensable.
5. No works in Floodplain Management Plan Zone A and D should be licensed for FPH nor should any lagoons or natural drought refugia.
6. No FPH works licenses should be granted until all unapproved and floodplain 'hotspot' works are removed or modified.
7. Support no access under resumption of flow rules – these must be stronger to protect higher end-of-system flows in Barwon-Darling tributaries: Border Rivers, Gwydir, Namoi, Macquarie
8. Strongly object to no FPH access target of below 195 GL in Menindee Lakes until forecast of at least 4,000 ML at Wilcannia. This offers no drought protection and will cause ecological damage. A target of 450 GL in Menindee is needed with higher forecast upstream flows.

Rules must protect held environmental water inflows from Queensland and NSW northern tributaries.

Inequity of water reforms

Allowing floodplain harvesting to grow was identified as an unresolved pre-existing equity issue when the Murray Darling Basin Ministerial Council reviewed the operations of the Cap in 2000. This inequity has been allowed to grow. Rather than remedy the inequity, the proposed harvesting volumes and accounting rules will entrench it.

This inequity results from:

1. Northern NSW valleys not limited to the Cap;
2. Free access to water in Northern NSW valleys; and
3. Volumes of water recovery.

Summary

■ support a licensing structure for FPH, it just must be applied under the same rules every other irrigator must abide by, it is illegal to contravene these rules.

- All water extracted from regulated rivers incurs fees and charges while water extracted through floodplain harvesting is free, subsidising those landholders and creating an unfair advantage compounding over the decades.
- Of the water recovered under the basin plan, 85 per cent has been sourced from the Southern Basin and these communities have borne the brunt of negative impacts.
- It is completely against the spirit of the *Water Act 2007* (Cth) to issue floodplain harvesting volumes which ultimately offset water recovery.