WENTWORTH GROUP
OF CONCERNED SCIENTISTS

Environmental Defenders Office

Submission to the NSW Government on the draft rules for floodplain harvesting licences to be included in water sharing plans within the Macquarie valley

16 April 2021

Introduction

Wentworth Group of Concerned Scientists and the Environmental Defenders Office welcome the opportunity to comment on the proposed rules for the floodplain harvesting (FPH) access licences in the Macquarie valley. 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 for affected communities and the environment within each valley and in downstream connected systems. This is particularly timely considering 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 therefore recommend the following safeguards are in place for managing FPH access:

- Active management rules are embedded in access licence conditions to ensure that water in the Macquarie valley will be prioritised for environmental purposes, basic landholder rights and cultural purposes within the valley and downstream. We recommend the rules in Table 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.

Why these safeguards are necessary

The proposed policy settings seek to limit FPH take in the long term to be compliant with existing take limits. However in their current form, they 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 Macquarie valley and downstream. Protection and management of environmental flow is a recommendation of the Matthews report[1], 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

[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

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 Event[2] 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

To overcome these concerns and guarantee outcomes in line with the LTWP objectives, water sharing plan (WSP) objectives, WMA 2000 and the Basin Plan, rules that provide for active management of overbank flow events are required. We recommend an approach which requires that FPH access allows for protection of PEW and HEW, and is conditional on satisfying within-valley and downstream flow targets.

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

> **Recommendation 1.** Active management rules are embedded in access licence conditions to ensure that water in the Macquarie valley will be prioritised for environmental and human purposes within the valley and downstream. We recommend the following rules (see Table 1 for details):
>
> 1. Flow targets on the Barwon-Darling as downstream triggers for FPH access in the Macquarie valley that reflect long term watering plan (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 which reflect LTWP water needs at key sites along the Macquarie valley. 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 planned environmental water (PEW) and held environmental water (HEW).
>
> **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.

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.

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

[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

regulators which can be switched on and off. No structures should be attached to a FPH water licence unless they meet this condition.

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.

Table 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). 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 in the Macquarie valley	This rule provides for the maintenance of minimum flows at key gauges in the Macquarie valley 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 Macquarie valley 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.

Wentworth Group of Concerned Scientists

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

Contact: Dr Celine Steinfeld <information@wentworthgroup.org>

Environmental Defenders Office (EDO)

EDO is a community legal centre specialising in public interest environmental law. EDO 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.

Contact: Dr Emma Carmody <emma.carmody@edo.org.au>